



MAY / 1958

THE MANAGEMENT REVIEW

THE MONTH'S BEST IN BUSINESS READING . . .

DIGESTS / FEATURE ARTICLES / BOOK REVIEWS

Special Features:

JOB STRESS AND THE EXECUTIVE:

1. The Myth of the Martyred Manager

2. 6,000 Managers Report Their Experience

What Kind of Managers Will Scientists Make?

Profit Opportunities in the Atomic Energy Industry

AMERICAN MANAGEMENT ASSOCIATION

Announcing . . .

A SPECIAL AMA

ECONOMIC MOBILIZATION CONFERENCE

May 19-20, 1958 • The Hotel Astor • New York

THIS SPECIAL CONFERENCE ON ECONOMIC MOBILIZATION was inspired by a statement by President Eisenhower, who said in an address on March 18, 1958: "The real mainspring of our kind of economy is not government, but the built-in thrust and vigor of private enterprise."

At this meeting, senior executives from some of the nation's leading companies will prove this statement by showing what management is doing to mobilize its resources to meet current economic conditions.

*The meeting will be concluded on Tuesday, May 20th,
by a dinner address by*

**THE PRESIDENT OF THE UNITED STATES
DWIGHT D. EISENHOWER**

*The Conference Chairman on Tuesday afternoon will be
THE VICE PRESIDENT OF THE UNITED STATES
RICHARD M. NIXON*

*The opening address on Monday, May 19th, will be made by
THE SECRETARY OF COMMERCE
SINCLAIR WEEKS*

Since facilities limit attendance, and registration is expected to be heavy, you should reserve your place at the meeting by registering promptly. Address Dept. M5, General Management Division, AMA.

**AMERICAN MANAGEMENT ASSOCIATION, INC.
1515 Broadway • Times Square • New York 36, N.Y.**



in this issue...



- **Executive Job Stress.** Harassed and haggard, working under almost continual tension to support the crushing responsibilities of his job—this is the picture of today's executive that is gaining currency, even though it has very little to do with the facts. In *The Myth of the Martyred Manager* (page 4), AUREN URIS tells why you can take with a grain of salt those articles you see from time to time that bemoan the penalties of success and darkly hint that your next promotion may kill you.

Solid support for Mr. Uris' contentions is to be found in the results of a major study of executive tensions just completed by the Life Extension Foundation. See page 13, *Job Stress and the Executive: 6,000 Managers Report Their Experience*, for the detailed findings of this survey—the largest of its kind ever undertaken.

- **Scientists into Managers.** With more and more scientists and technicians assuming key managerial jobs, it's time to ask what impact this trend will have on tomorrow's management. In his article (beginning on page 22), HERBERT E. KRUGMAN tells what we can expect of the new wave of immigration from lab to front office.
- **New Cake to Cut.** There are handsome profits to be made in supplying the special products required by the atomic energy industry, and some companies have already taken front seats on the bandwagon. PHILIP MARVIN's article (*Profit Opportunities in the Atomic Energy Industry*, page 29) will help you answer the two payoff questions: What's in it for my company? And how do we get started?

—THE EDITORS

MAY 1958

Volume XLVII, No. 5

THE MANAGEMENT REVIEW

FEATURES

JOB STRESS AND THE EXECUTIVE:

4 The Myth of the Martyred Manager
by Auren Uris

JOB STRESS AND THE EXECUTIVE:

13 6,000 Managers Report Their Experience
Life Extension Foundation

22 What Kind of Managers Will Scientists Make?
by Herbert E. Krugman

29 Profit Opportunities in the Atomic Energy Industry
by Philip R. Marvin

BUSINESS DIGESTS OF THE MONTH

Trends and perspectives

40 Will This Be a Strike Year? (*The Wall Street Journal*)

46 Who Speaks for Small Business? (*American Machinist*)

65 Sites for Sale: The Big Pitch for New Industry
(*Industrial Marketing*)

68 Has the Consumer Lost His Appetite? (*Business Week*)

70 Pushbutton Decisions: How Far Ahead?
(*Dun's Review and Modern Industry*)

Management policy and practice

- 43 The Big Swing in Inventories (*Fortune*)
- 49 Product Styling: Is This Change Necessary? (*Industrial Design*)
- 55 We're Wasting Scientific Manpower (*Harvard Business Review*)

Operating guides for executives

- 35 Getting Ready for the Upturn (*Nation's Business*)
- 53 Slimming Down Your Report System (*The Office*)
- 59 Long-Range Financing: Some Do's and Don'ts (*Industrial Development*)
- 73 Twelve Ways to Help Local Schools (*National Citizens Council for Better Schools*)
- 80 How to Look Indispensable (*New York Herald Tribune*)

What others are doing

- 37 Revolution in Retailing (*Printers' Ink*)
- 62 Doorbell Pushers: Still Ringing Up Sales (*Barron's*)
- 77 Life Insurance Strikes It Rich (*Newsweek*)

DEPARTMENTS

Also Recommended—page 82

Brief summaries of other timely articles

Survey of Books for Executives—page 94

Cover photograph: A. Devaney, Inc.

HARWOOD F. MERRILL, *Editor-in-Chief*

VIVIENNE MARQUIS, *Executive Editor*

ROBERT F. GUDER, *Associate Editor*

PETER REID, *Digest Editor*

LYDIA STRONG, *Contributing Editor*

JULIET M. HALFORD, *Book Review Editor*

THE MANAGEMENT REVIEW is published monthly by the American Management Association, Inc., at 1515 Broadway, Times Square, New York 36, N. Y. Entered as second-class matter March 26, 1925, at the Post Office at New York, N. Y., under the act of March 3, 1879. Subscriptions: \$7.50 per year (non-members, \$12.50). Single copies: \$1.00 (non-members, \$1.25). Volume XLVII, No. 5, May, 1958.

Changes of address should be forwarded to the publishers six weeks in advance, and postal zone numbers should be included in all addresses.

The American Management Association does not stand sponsor for views expressed by authors in articles issued in or as its publications.

An index to THE MANAGEMENT REVIEW is published annually with the December issue. The contents are also indexed in the Industrial Arts Index. THE MANAGEMENT REVIEW is microfilmed by University Microfilms, Ann Arbor, Mich.

Copyright © 1958 by American Management Association, Inc.

JOB STRESS AND THE EXECUTIVE:



*The myth of the
MARTYRED
MANAGER*

■ *Auren Uris*

Research Institute of America

AN AMERICAN FAMILY touring the Vatican stopped before the statue of Laocoon, the ancient Greek priest of Apollo, writhing in the coils of the serpents.

"Looks like Daddy at the office," remarked the teenage daughter. Don't be too quick to dismiss the remark as teenage flippancy. Think for a moment of the image we have created of the modern manager, and the aptness of the youngster's comment becomes striking.

Today's executive, we say, is much put upon. He's harried, ulcerous, enmeshed in the twin coils of tremendous responsibility and a top-heavy work schedule. A typical work day puts him through a wringer of multiple demands and crises that leave him, at the end of the day, limp and bone-weary.

And what proof do we have that, though he's bloody, he's still unbowed? We point to the fact that securely tucked under his arm is a briefcase bulging with work he will tackle in the sanctuary of his home.

You might almost expect the executive, regarding the Greek statue and noting the simplicity and directness of the struggle of man against serpent, to murmur, "You never had it so good."

Perhaps this representation of the executive seems to exaggerate the facts. As evidence to the contrary, here are some titles of articles about executives appearing in recent periodicals:

YOUR NEXT PROMOTION CAN KILL YOU

WHY EXECUTIVES DIE YOUNG

JOB STRESS, THE EXECUTIVE MALADY

If the image of the downtrodden executive were merely a harmless fiction, it could be dismissed lightly. After all, the stereotype does lend itself to TV humor and a somewhat poorly concealed satisfaction on the part of a few self-pitying managers.

But we have become more aware of the influence of our self-image on our attitudes and behavior. It is becoming increasingly evident that our portrayal of the executive as a man hanging on to his health, his reason, his very life by his fingertips has a profound effect on managers as a group.

THE INFLUENCE OF AN IMAGE

Consider, for example, executive performance. The executive who thinks of himself as a worry-laden toiler, struggling to keep his head above water, isn't likely to undertake new assignments with the self-assurance that increases the chances for success. The challenge of his job represents a threat rather than a promise of accomplishment.

The next point goes to the heart of an area of even greater management concern: executive health. There is evidence that the concept of the executive as a man continually under stress has *actually contributed to executive illness*. In a study of 3,500 executive health examinations, it was found that *complaints* of ill health were considerably higher than findings. Here are the figures:

<i>Age Group</i>	<i>Complaints Without Findings</i>
Over 60	12 per cent
56 - 60	15 per cent
51 - 55	22 per cent
46 - 50	25 per cent
41 - 45	30 per cent
36 - 40	27 per cent
31 - 35	30 per cent

Could it be concluded that executives, under the persuasion of the popular image of the afflicted manager, develop a hypochondria that is of itself harmful to health? At least one medical authority expresses precisely that view.

Says Dr. Harry Johnson, Medical Director of Life Extension Examiners: "All this talk about the unusually high incidence of disease in their ranks is turning executives into worried, fearful, and sometimes neurotic creatures. If they are not sick, they think they should be—because they're executives. It's ridiculous, and it's high time we put a stop to this nonsense."

THE BIRTH OF A MYTH

Considering the damage that derives from the grim picture of the manager, we may well wonder how and why it developed. The answer is that it is a concept from a past in which it *did* possess some validity.

The executive of the twenties and thirties was indeed an individual who deserved commiseration. He was a man lost in a trackless jungle. As the practitioner of a new occupation, each job problem leaped out upon him like an unfamiliar beast. With no backlog of experience, he couldn't be sure whether it was rabbit or tiger that confronted him.

But the situation has changed. Management experience has become substantial and systematized, so that today's executive may reap the benefits of the past. From a vast store of management know-how, he can draw the knowledge that can help him proceed with reasonable certainty—as does the doctor, the lawyer, or any other professional.

THE DIRECTION OF IMPROVEMENT

Today's executive can recognize and identify crises as they occur. He can tell an organization problem from one of procurement. He knows the difference between a problem of motivating subordinates and one of developing more efficient methods for them to follow.

Take the decision-making function. Let's say an executive has to decide whether or not he should buy a larger stock of raw materials than he needs at an attractive price. Should he tie up company funds?

The old-style executive would decide for or against the move largely by hunch, because he knew of no other way. At best, his decision would be based on his calculation of the rate at which the material would be used and the possible profit of buying at less than the going rate.

But today's executive has many more guides. Management functions are more highly developed. He can have projections made of sales of the finished goods that use the raw material and of the price of the raw material itself. His financial expert can advise him regarding the comparative merits of the investment.

Even further, if he applies operations research techniques to the problem, he can spell out the comparative cost of buying as against the cost of not buying, or of buying as compared to another form of dollar investment, and still further minimize the risk element of his decision.

In view of real changes in the executive's job, why have we clung to an outdated executive portrait? Partly for the same reason we leave the art atrocity that Aunt Jennie gave us hanging on the wall: It will leave a mark if removed, and we have nothing at hand with which to replace it.

It's desirable to create a new and more realistic executive portrait to replace the old one. Where can we look for the components we need to draw the truer likeness? We need only look at the modern executive himself, as he goes about his daily task.

From evidence we see about us, we can replace the old image of the executive by a positive, constructive picture. This new image will be drawn from the facts of present-day executive activity, rather than the holdovers from a dead past.

THE NEW EXECUTIVE

Examine the modern executive in action and you see what he is—and why:

Monetary rewards. As with other professionals, the financial return to executives covers a wide range. Salaries may range from a modest \$5,000 for a newcomer to astronomical figures for top men.

But the annual paycheck alone doesn't tell the whole story. Considerable time and ingenuity has been devoted to the problem of increasing executive remuneration. Profit-sharing bonuses,

on of
ondria
uthority
ension
nce of
earful,
think
, and

ure of
. The
possess

indivi-
ackless
problem
backlog
or tiger

ce has
we may
gement
proceed
or any

ly occur.
ent. He
ordinates
follow.
tive has
of raw
e tie up

deferred compensation plans, stock options, use of company car or plane, and liberal expense accounts tend to put executive salaries several cuts above that of other professionals.

Social benefits. When you describe the executive as a professional, you've already gone a considerable way in pinpointing his superior status in the average community.

But here again, the executive, because of his relationship to a company organization, is at an advantage over other professionals. For example, many executives live in the same town as lower-echelon employees, and because job status is transferred to the community situation, they become community leaders.

Even if this superior social status is not considered an asset by the executive himself, it's an advantage that's far from lost on the wife and other members of his family.

Security. No one, including the executive, is hired forever. But for a variety of reasons, the executive, despite turnover figures to the contrary, tends to stay put. A *Fortune* survey of 900 top managers shows the number of previous employers (companies) for which they worked:

<i>Previous Employers</i>	<i>Per Cent of Executives</i>
0	33
1	27
2	17
3	12
4 or more	11

One factor that accounts for a substantial percentage of the job-switching that does occur among managers is the "hiring away" tactics of companies desperately in need of managerial skills. In other words, executive job-hopping often represents surges up the ladder rather than the loosening of a weak grip on a coveted job.

The manager today has considerable job mobility, which he is often able to use to his own good advantage. He may switch, for example, from one industry to another, since the problems of management and administration tend to be similar, regardless of the product or processes of the company. His ability to wield the tools of his profession means he has something as specific to offer to a prospective employer as an architect or engineer.

The market for his talents is further testimony of the manager's

commanding position in the business scheme of things. It is a seller's market, as witness these recent articles:

- "Executives—The Painful Shortage," a *Newsweek* article highlighting the inability of companies to find qualified managers.
- "Recruiting Executives Even Harder," an *American Business* report of a recent survey by the American Management Association.
- "Business Reported Facing Acute Executive Shortage," a *Journal of Commerce* report of a study by the National Industrial Conference Board. The lead paragraph reads: "Executives are becoming scarce. Hundreds of top positions are remaining unfilled because the right people cannot be found, and the creation of new management positions and demands of new business will keep the executive market tight for years to come."

EFFECTS OF MANAGEMENT DEVELOPMENT

Few other professionals can boast of the interest in increasing their skills shown by the average company today towards its executives. No single figure indicates the magnitude of the financial outlay by management to buttress executive personnel, to train them in personal and organizational skills. It's known, however, that General Electric has spent \$2,500,000 on facilities alone for its Management Research and Development Institute. Practically every large company you can name has made some similar expenditure for the cause of improving the ability of its managers.

The investment per manager, although not reducible to a dollars-and-cents figure, is an indication of the value the average company places on its top personnel.

Psychic gain. The executive job today carries with it a greater potential for the sense of achievement than almost any other you can name, barring only the arts. We have been told that one of the problems of modern society is the separation of the worker from the fruits of his labor. Frustrations, feelings of inadequacy, emotional hunger—all have been ascribed to the inability of individuals to savor the results of their effort.

It's a view that seems to have considerable soundness. But it should

be noted that this situation is not true of the average executive.

The manager is surrounded by the physical evidence of his activity and achievement. It's "his department," "his employees." His office is a personal place of work, in many companies equipped with an almost celestial aura. That's his prestige showing.

The growth of his department, the expansion of his responsibilities, the improvement in the skill and efficiency of his subordinates —these and many related factors are tangible evidence of his creativeness.

For the manager who is imaginative and ingenious, his job holds an almost unending opportunity for the application of these talents. His planning, his investigation of problems or new areas for profit, can take all he's got in the way of such personal potential.

SATISFACTIONS OF LEADERSHIP

Certainly, it must have been considerations of this kind that led Edwin J. Schwanhausser, president of Worthington Corporation, to state, in *Dun's Review and Modern Industry*: "Not enough attention is being paid to the satisfactions of leadership—the pleasures of being a manager—the fun of being a president . . . Jobs of executive responsibility up and down the line have attractions which should draw the ambitious like a magnet . . . More executives must confess, as I do here, that I love my job."

In addition, today's manager is making a signal contribution to the progress of our economy and our way of life. Hand in hand with our reliance on the scientist and engineer to help us stay in the economic race with Soviet Russia goes our tacit dependence on management to continue to forge ahead in its operational function. In the words of author-economist Peter Drucker: "Truly the entire free world has an immense stake in the competence, skill, and responsibility of management."

Not without cause has the executive been called the symbol of the strength and potential power of today's shield of democracy, an expertly managed economy.

CONFORMITY—AN OCCUPATIONAL HAZARD?

An occupational cloud has been spotted on the executive's horizon—with considerable argument as to its size and significance.

ive.
his
ees."
pped
bili-
nates
his
holds
ents.
profit,

that
ation,
ough
—the
...
attract-
More

ion to
hand
stay in
dence
func-
ly the
, skill,

bol of
ocracy,

utive's
ciance.

ENT REVIEW

William H. Whyte, Jr. in *The Organization Man*, has detailed the plight of the manager who succumbs to the enveloping embrace of a loving, but paternalistic, organization.

Is the executive indeed the modern prototype of the man who has gained the whole world, but lost his soul in the process? Whyte views the situation with alarm, counseling that the executive fight this tendency, difficult though the struggle may be.

Actually, the problem that Whyte describes is not universal. Its presence is largely limited to a few larger organizations that have mistakenly sought for efficiency in terms of the conformed and tractable individual.

But possibly a more representative view and one that more truly keynotes the future was voiced by Crawford H. Greenewalt, president of E. I. duPont de Nemours & Company:

Men are not interchangeable parts like so many pinion gears or carburetors; genius, as John Adams said, is bestowed "imperiously" by nature upon an individual.

And behind every advance of the human race is a germ of creation growing in the mind of some lone individual, an individual whose dreams waken him in the night while others lie contentedly asleep. We need those dreams, for today's dreams represent tomorrow's realities.

For the manager who might fear a moral or spiritual stultification in his job, Greenewalt's words are good cause for comfort.

So, too, is the statement by Keith S. McHugh, president of the New York Telephone Company, in a speech delivered at Colgate University:

The practical results which made the United States the strongest economic nation in the world could never have been attained without hundreds of thousands of instances of individual initiative in business organizations. They certainly could not have been reached if a virtue had been made of conformity.

Talk to executive recruiters and you're likely to get a picture directly opposed to the "conformed manager" idea. Initiative and originality are far more likely to appear on a list of executive qualifications than yes-manism and docility.

Thus, the composite executive of today is respected, creative, making a positive contribution to his world. He has a good job. Of course, nothing that's been said is meant to imply that the modern manager does not have a job that is weighted down with

responsibility; that crises requiring solution by tough decisions are not his lot; that long hours and a hectic pace are not typical of his labors.

Do executives have heart attacks, ulcers, high blood pressure? Certainly. Yet, here's a report from the Occupational Health Service of Asheville, North Carolina, based on examinations of 50,000 individuals. Their findings: Low- and middle-income industrial workers are just as prone to ulcers, heart ailments, and hypertension as highly paid executives.

THE EXECUTIVE TEMPERAMENT

Interestingly enough, many executives consider the pressure aspect of their jobs a virtue. More and more executives are finding out that the difference between despair and delight in their work depends on the *ability to accept pressure* as part of the job. Here's how this fact emerged from an interview of one executive:

"Would you say your job involves a considerable amount of pressure?"

"Sometimes it gets to be like a madhouse."

"Would you be willing to change your job for one with less pressure?"

"At the same pay?"

"Yes."

After a moment's hesitation: "No, I don't think I would."

"Why?"

After another moment's hesitation, in sudden realization: "I guess because I really *enjoy* the pressure of my job."

Another executive, taxed with the old saw that executives are worriers, replied by saying, "I still worry, but I take my worrying less seriously."

But it's in the comment of the head of the management development program of a large oil company that you get the best updating of viewpoint: "The good executive is the man who feels comfortable in a constant state of uncertainty."

There you have a final difference between the hackneyed concept and today's fact: The modern manager is becoming increasingly capable of making the emotional adjustments his job requires.

JOB STRESS AND THE EXECUTIVE:



6,000 Managers Report Their Experience

■ *Life Extension
Foundation*

IT HAS BEEN QUITE GENERALLY ACCEPTED that tension exists in the business world of today to a greater extent than ever before, and that it has baleful influences on the health and efficiency of the executive. Yet the replies of more than 6,000 executives to a recent questionnaire indicate that the extent and degree of executive stress are far less than is popularly believed—that executives, by and large, aren't aware of either tension or tension-producing influences in their jobs.

This Life Extension Foundation study, the largest of its kind ever completed, suggests strongly that the tension that does exist—and the accompanying ill effects of such stress—stem from within the individual executive rather than from any outer forces of his living or working environment.

WHAT IS TENSION?

Tension is as important an element of living as hunger or thirst. Like fire, it can be invaluable when controlled, but, unharnessed, its effects can spell disaster. In business, as in every other aspect of life, tension furnishes interest, excitement, and incentive and promotes achievement and happiness. When, on the other hand, living becomes a series of uninterrupted crises and emotional upsets, these benefits quickly become dangers. Occasional tension is good for all men, but the presence of constant stress is harmful both to mind and body.

In order to determine more accurately the actual extent of executive tension, the awareness of the businessman of its existence, the nature of its cause or causes, and possible solutions, the Life Extension Foundation recently mailed a four-page, 49-question questionnaire to 10,000 businessmen on all levels of management. Completed returns were received from 6,013 of these men, repre-

senting all age groups in 18 occupations among 179 companies (which represented 25 different industries in every state of the union, Canada, and 12 foreign countries). On the following pages, the results of this survey are set forth. Part I is concerned with the major question, "Does executive tension exist?"

1. Do their job requirements cause excessive tension?

Of the 6,000 businessmen reporting:

78.5% do not feel that they are working too hard.

About homework:

70.0% never or only occasionally take business work home, and 74.0% put in fewer than five hours a week on homework.

About entertainment:

80.1% average no more than two business luncheons a week.

89.0% average no more than one evening business date a week.

89.7% average no more than one weekend business date a month.

About travel:

30.5% do no business traveling at all, and

38.9% spend less than five days a month away from home on business, while only

17.4% spend more than two hours a day commuting.

Observation: More than 75% of these businessmen say that they enjoy reasonable job requirements.

2. Are they happy in their work?

The survey shows that—

81.2% of the 6,000 men like their jobs very much, and only

1.3% of the group are actually bored with their work.

Furthermore—

79.5% either like or accept homework with reasonable willingness,

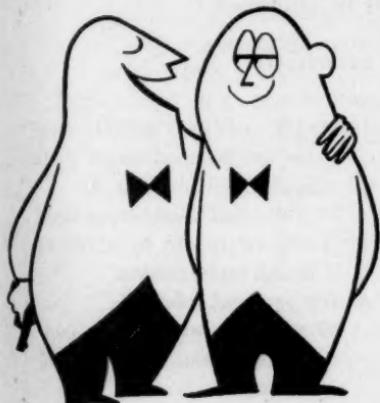
79.0% enjoy business luncheons,

74.7% enjoy business entertaining, and

67.5% like business travel.

Observation: More than 75% of these businessmen like their work and its demands.

3. Are they satisfied with their business associates?



The survey asked: "Is there someone with whom you work whom you would like to 'drop off a bridge'?"

81.8% of the 6,000 men answered "No."

"Do you feel your superior is stealing all the glory while you do all the work?"

94.4% of the 6,000 men said "No."

"Can you express yourself to your business associates (especially superiors) without fear?"

Only 1.1% replied "No."

Observation: Few businessmen have important personality conflicts with associates.

4. Do they have adequate incentive to avoid tension?

Here's the measure of *peace of mind and encouragement* they report:

85.7% say they have a feeling of security in their job, and only

6.5% are dissatisfied with the progress they are making; only

6.2% feel short-changed on recognition.

And as for *home support*—

82.1% feel that their wife's attitude toward their career is encouraging and helpful.

77.8% say that their wife enjoys being included in business entertaining.

87.7% consider their wife indulgent of business homework; and only

6.4% of the entire group do not think that their wives are completely satisfied with their business progress.



niess
the
ving
urned

ome,
ome-

week.

ate a

late a

home

that

and only

willing-

their

Observation: In their own judgment, businessmen enjoy security, peace of mind, and encouragement in sufficiency.

5. How prevalent is worry among businessmen?

When asked about *unusual concerns*—



82.1% of the 6,000 men are not worried about their health.

77.2% had been reassured of good health by a recent health examination.

As for *personal affairs*—

79.4% are not unduly concerned about personal finances.

85.8% are free of any serious home worries.

And in *business*—

74.1% of the group report no major office problems.

87.0% don't worry too much about decisions they make.

80.7% have no fears about not getting enough work done.

Observation: Most businessmen claim that they are reasonably free from excessive tension-producing anxieties.

6. What are the living habits of businessmen?

Poor living habits can cause tension. Here's what the 6,000 executive say about theirs. About their *sleep*:

89.1% say they have no difficulty getting to sleep, and only 6.0% complain that they sleep restlessly, while

86.6% sleep an average of seven hours or more a night, and only

3.3% take sedatives regularly to induce sleep.

As for *recreation*:

92.4% most generally have their weekends free from business.

49.8% are active in extracurricular interests.

62.2% have a hobby, 80% of whom pursue it on weekends.

47.8% get some form of regular exercise.

77.5% take a summer vacation, and

30.7% vacation in the fall and winter months (8.2% get away at both times), and their vacations average 2½ weeks a year.

Eating, drinking, and smoking: 13.7% of the 6,000 men are on special diets.

90.0% *do not* regularly have cocktails at luncheon, and 63.7% dispense with a regular predinner cocktail.

57.8% smoke, two-thirds of whom smoke over a pack of cigarettes a day.

And as for *tranquilizers*:

4.6% of the entire group say they use them.

Observation: The majority subscribe to sound living habits.

* * *

DOES TENSION EXIST?

Objectively, then, in their job requirements, attitudes, incentives, concerns, and living habits, 75 per cent of the 6,000 businessmen agree that they neither live nor work under conditions favorable to excessive tension. This means that only one out of four are exposed to constant stress.

Subjectively, the picture is even better. In reply to the question of whether they worked under tension, only 13.3 per cent say that they work under constant stress. This means that only one out of seven businessmen are really aware of constant tension.

Thus, in the opinion of 6,000 business executives, neither tension nor tension-producing influences exist to the extent or degree held by popular belief.

Part II of this study is concerned with the question, "When excessive tension does exist, what causes it—the job, or the man?" The results of this comparative analysis of the men under constant tension vs. those reporting occasional or no stress are indicated on the following pages.



1. The job: Do its demands cause the excessive tension?

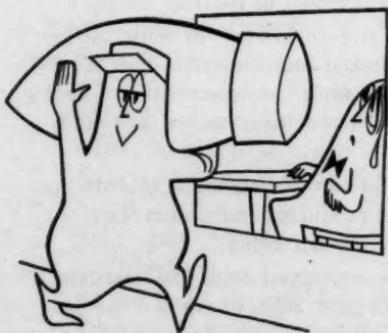
3½ times as many under constant tension say they are working too hard, and 5 times as many under constant tension say they work under continuous pressure. Yet:

- ... The incidence of frequent homework is only 8.8% more, and the incidence of most hours of homework 9.7% greater in this group than among those under little or no tension.
- ... Week-day evening business dates average only .1 date more per week than for those under little or no tension.
- ... 5 fewer must travel on business, and those who do travel are on the road for less time than the group under little or no tension.
- ... The men under constant tension average 2 business luncheons a week, contrasted to a 1.8 average for the others.
- ... Fewer under tension start their workday at 8:00 A.M.; more start at 10:00 A.M.; fewer quit work at 4:00 P.M.; and more head for home at 6:00 P.M. But:
- ... Their workday averages the same length as those under little or no tension.

Observation: Job requirements are much the same for both groups —those under constant tension and those reporting little or no tension.

2. The job: Does the type of occupation cause excessive tension?

The survey shows that constant tension occurs in—



21.3% of the advertising men, yet in only 6.7% of those engaged in research work. But Men in sales promotion report next to the smallest amount—7.1%—and Those in legal work, next to the highest—17.5%. Personnel and financial executives reported 16.4% and 15.0%. Men in general management—the average boss—showed nearer the average incidence of tension: 13.6%.

Observation: The incidence of tension varies so widely among occupations that no significant pattern can be established on the basis of these characteristics: creative, analytical, personal contact, multiple responsibilities.

3. The man: Is his attitude toward his job a cause for tension?

Among those who report constant tension—

Boredom with their job is

355% greater . . .

Job insecurity is 174% greater . . .

Dissatisfaction with business progress is 155% greater . . .

Dislike of business entertainment is 59.2% greater . . .

Aversion to business travel is 44.7% greater . . .

Distaste for business homework is 31.5% greater . . .

. . . than those indicating little or no tension. And

60% more of the high-tension group would like to retire by age 55!

Observation: On every count, the incidence of dissatisfaction with the job and its requirements is significantly greater among businessmen under excessive tension.

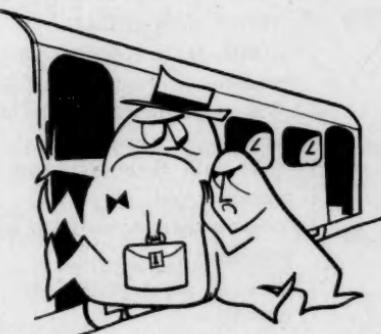
4. The man: Does his attitude toward business associates influence tension?

Here are the findings:

. . . *Dislike* of someone with whom they work is 98.7% more prevalent among those with constant tension than among those who report little or no tension.

. . . *Suspicion* that they are not receiving fair credit for their efforts is 206.8% more common among those suffering from continuous stress than among those under little or no tension.

. . . *Fear of self-expression* is 633% more frequent among the group under constant tension than among the other executives surveyed.



working
they
more,
greater
more
travel
tle or
heons
more
and
little
groups
or no
nsion?
ertising
ged in
on re-
smallest
nd
ext to
6.
nal ex-
16.4%
agement
boss—
average
13.6%
ENT REVIEW

Observation: Personality conflicts score high among men under constant tension.

5. The man: Is his age a factor in tension?

Respondents were classified into five-year age groupings.

The incidence of constant tension was *highest* in the age group 30-35—16.2%—and progressively declined as age increased to a low of 8.2% among those over 60 years of age. *But tension related to length of service contradicts this!*

For, the survey showed that—

7% with their company less than one year report constant tension.

11.8% with their company one to five years report constant tension.

13.6% with their company over five years report constant tension. And

10.6% in their present job less than one year report constant tension.

13.5% in their present job over one year report constant tension.

Observation: Men under constant tension cannot agree that age significantly influences tension.

6. The man: Are unregulated living habits associated with tension?

Comparing the high-tension group to the others—

When they *eat*:

67% more eat breakfast on the fly (under 5 minutes).

86% more throw their lunch down (under 15 minutes).

21% more hurry through their dinner (under 30 minutes).

And 1 out of 3 on diets are nursing gastric disorders.

In their *recreation*:

47% fewer get some form of regular exercise.

20% fewer have extracurricular interests (church, civic, etc.)

18% more have no hobby at all. And

1 out of 5 gets no recreation whatsoever.

For their *rest*:

46% more average 6 or less hours of sleep at night.

139% more rarely have weekends free for family and self. And

Their vacation time is 20% less than the over-all average.

In their *smoking and drinking*:

50% more are heavy cigarette smokers.

under
the age
as age
of age.
constant
constant
constant
constant
hat age
ension?
).
tes).
nutes).
ic, etc.)
self. And
age.
ENT REVIEW

32% more have cocktails for lunch (155% more drink more than two).

9% more have cocktails before dinner. (39% more drink more than two).

In the *drugs they take*:

150% more use sleep-inducing sedatives, and

165% more quiet their nerves with tranquilizers.

Observation: On every count, living habits are poorer among businessmen working under constant tension than among those with few or no tensions.

7. The man: Are worries creating his tension?

The survey shows that—

7 out of every 10 men under constant tension report some significant personal problem.

Comparing their worries to the rest of the group:

175% more have office problems, and 75% of those who have also report some business personality conflict.

133% more worry about their health, yet only 16% more indicate a health deficiency.

83% more are concerned about personal finances, yet, as a group, their incomes average over \$14,000—slightly above the average for the entire 6,000 men.

Observation: Confirmation in the first instance, contradiction in the latter two, strongly associate their worries with their attitude.

* * *

WHAT CAUSES TENSION?

Based on the replies of the 13.3 per cent who reported constant tension, it seems clear that stress is not caused by age, occupation, or job demands. What, then, is its cause? Why does this group feel the ill effects of tension so much more strongly than the majority?

In the light of their responses to questions concerning their attitude toward their jobs, their business associates, and personal conditions, we can conclude that tension is clearly identified with the personality of the individual executive. Stress stems from within the man himself, not from the outer forces of his living or working environment. In other words, their jobs aren't killing them—they are killing themselves.



What kind of
MANAGERS
will
SCIENTISTS
make?

■ **Herbert E. Krugman**

Richardson, Bellows, Henry & Company, Inc.

AMONG THE PRESIDENTS of the 500 top U.S. companies, the Bachelor of Science degree already outnumbers any other single degree. Furthermore, an MIT survey of the 151 largest manufacturers showed that 91 have vice presidents of research and development, as compared with only 42 a decade ago. Admittedly, a Bachelor of Science degree doesn't make a man a scientist, and research and development executives are often cut off from participation in general management. Yet these figures are indicative of the growing involvement of scientists and technical personnel in top management.

There are two general reasons for believing that the trend toward scientists in top management will accelerate. One is automation—not automation of new production processes and equipment, but the more striking form of automation brought about by information processing equipment. Some have described the current situation as an "information explosion," predicting that "seat of the pants"

management will be replaced or at least supplemented by scientific training when weekly, monthly, or quarterly reports give way to immediate and continuous total reporting. The assumption here is that only a scientifically trained mind can take advantage of the shift from a relative scarcity of information to a superabundance.

It is also pointed out that, contrary to popular thinking, the facts do not "speak for themselves," but must be organized and interpreted. Presumably, a management with scientific training can give better direction to operations research teams, as well as use their findings with greater understanding.

Although some of these assumptions may not be true, it is likely that, on the whole, the new scientific atmosphere of management will bring more scientific people into top-management positions.

THE GROWING PRESTIGE OF SCIENCE

A second reason for expecting acceleration in the trend toward scientists in management is the growing prestige of science. As the importance of the scientist becomes increasingly recognized in our society, as scientists begin to represent a new elite, they will increasingly come into contact with the industrial and business elite. Such associations may well speed their acceptance by management, much as the acceptance of military people into management has been accelerated since World War II. (For example, in the fifty leading U.S. companies there are now twelve vice presidents, eight presidents, and five board chairmen who were formerly military men.) This is not to say that generals or scientists are hired for prestige purposes, but their prestige and importance are factors that lead many companies to look them over carefully for signs of managerial talent.

Some signs of this trend are already apparent. The proportion of scientifically trained men in management is increasing, although it varies greatly from company to company. W. F. Thompson of Westinghouse, who studied the probability of engineers being promoted into supervisory positions in three organizations, reported a 35 per cent figure for what he described as a high-stability firm, 50 per cent for what he described as an average company, and 95 per cent for an aircraft company. The National Society of Professional Engineers, in a survey of 100 leading employers of en-

ties, the
r single
manufac-
develop-
ately, a
list, and
n partici-
cative of
onnel in

d toward
nation—
ment, but
formation
situation
the pants"

gineers, found that 92 per cent "look to" engineers for managers, and 99 per cent have managers who are engineers.

INTEGRATING SCIENTISTS INTO MANAGEMENT

On the other hand, most of these 100 employers have no organized plan for telling engineers about their future opportunity as managers, and even those who did have such plans confined them to the introductory training program. Thus, integration of the two different orientations, scientific and managerial, usually comes late in the life or career cycle of the individual.

Some companies attempt to bring about integration by means of a "technical forum," a wholesale technical conference bringing together all technical people in the company for a few days. This also serves as a good forum for discussion of general management problems by visiting management executives. This technique is used by Minnesota Mining & Manufacturing, U.S. Rubber, Union Carbide & Carbon, Charles Pfizer, Esso Research & Engineering, and Du Pont. Westinghouse, on the other hand, has a three-point program, featuring (1) guided self-development of the engineer as manager by his superior, (2) job rotation, and (3) courses in cooperation with the University of Pittsburgh. At General Electric, engineers are recognized as part of management and included in the management school at Crotonville, and at Monsanto there is a special management course for engineers.

In short, one way or another, we can expect to see many more scientist-managers in coming years. What will they be like? What kind of executives will they make?

THE SCIENTIFIC PERSONALITY

According to Professor Louis Terman, who has been making a long-term study of 1,400 gifted children since 1921, scientists are characterized by an early interest in mechanics, mathematics, and science. Some, indeed, are shy and lonely, but not unhealthfully so. That they lack social skills is not surprising in view of the extensive time devoted to their intellectual interests. All researchers who have looked into this question stress that scientists lack social skills by default only. That is, their interest in scientific matters

came first, and so early that some of the social activities just never got under way in the manner of other children. However, though this does highlight a problem when scientists and socially skilled businessmen come together, it also suggests that there is nothing inherent in the make-up of scientists that would keep them from making effective use of training in communication and leadership skills.

ARE SCIENTISTS DIFFERENT?

As mature and successful people, scientists are portrayed by recent research to be very much like what Terman's study of gifted children would indicate. However, these psychological studies of eminent scientists made by Dr. Anne Roe do not show a vast difference in amount of intelligence between scientists and others. Scientific intelligence may, however, be different in kind—e.g., relatively higher on spatial orientation, lower on verbal skills.

The one outstanding characteristic common to all the physical and natural scientists studied was dedication and devotion to their work, which they enjoyed and preferred to other activities. Geniuses are more often made than born—and it is hard work that seems to do the trick. As Professor Herbert A. Toops of Ohio State University used to tell his classes, "The union day for geniuses is 16 hours."

The personality of such scientists is undoubtedly overshadowed by their single-minded devotion to work. But that work provides real satisfaction, and it is by no means an "escape" from other activities. Nor is such dedication restricted to those of a scientific bent. In short, research has as yet revealed no *basic* difference in personality between scientists and nonscientists.

SCIENTISTS ON THE JOB

The behavior and attitudes of scientists and technically trained personnel on the job also throw some light on their suitability for managerial positions. Recent studies of engineers, for example, indicate a strong feeling of identification with their own profession and dissatisfaction when their professional status is not recognized.

The table (Figure 1) shows the average percentage of favorable responses to five questions each on eleven categories of job satis-

faction. The questionnaire was used in 37 plants, 14 of which were primarily technical in nature, employing primarily engineering personnel.

FIGURE 1.
PER CENT REPLYING FAVORABLY IN ELEVEN
CATEGORIES OF JOB SATISFACTION

CATEGORY OF JOB SATISFACTION	TECHNICAL PLANTS (14)	OTHER PLANTS (23)	PER CENT DIFFERENCE
Group Harmony	90	85	+ 5
Orientation and Information	77	82	- 5
Worthwhileness	74	79	- 5
Management	69	78	- 9
Supervision	72	78	- 6
Communications	61	62	- 1
Compensation	60	63	- 3
Future Opportunity	59	61	- 2
Working Conditions	44	56	- 12
Operating Efficiency	47	50	- 3
Work Pressure	43	52	- 9

To put a little meat on these figures, information picked up in personal interviews indicates that what is desired is:

- *Recognition.* They want to be assured that their superiors know how well they're doing.
- *Information.* They want to be kept informed, hold interdepartmental meetings, avoid unnecessary secrecy or duplication of effort.
- *Efficiency.* They want facilities for getting their work done; they want to understand reasons for delays and deficiencies.
- *Staff assistance.* They want to be relieved of burdensome red tape and paperwork.
- *Definite assignments.* They want to "follow through" on jobs they have started.
- *Professional affiliations.* They want management to encourage, rather than merely tolerate, their affiliation in professional societies.

What all this adds up to is that engineers want to do a good job of being engineers and to be appreciated for it; i.e., their identification with the profession is very strong.

In college, our science students split into two groups, the pure or physical scientists and the engineers. In general, it may be said that the so-called pure scientist learns humility and dedication

which
engineering
ENT
ENCE
6
6
6
9
6
1
3
2
3
9
up in
y how
mental
they
l tape
s they
rather
good job
identifi-
the pure
be said
cation
ENT REVIEW

while the engineer learns confidence in rational thinking—a confidence that may bravely, or sometimes indiscreetly, be applied to any and all types of problems.

Journalistic explorations of how scientists fare as executives have been conducted in the Los Angeles area, a hothouse for the new breed of scientist-managers. In Los Angeles, most of these scientist-managers are physicists and Ph.D.'s, and their characteristics are described by staff writers from *Business Week* as (a) application of scientific method, (b) lack of crisis or confusion, (c) team spirit, (d) group decision-making, (e) ideas greater than authority, (f) more delegation, (g) hard-headed type of scientists, and (h) standard executive social life. It is noteworthy that at least three of these characteristics (a, d, and f) are facilitated by the common language of mathematics.

In contrast to this evidence of teamwork and good communication among scientists themselves, scientists and nonscientific management seem to have difficulty communicating their ideas and goals and understanding each other's points of view. A Booz, Allen and Hamilton survey of 3,500 research workers in 23 R & D departments indicated strongly that the aims, goals, and purposes of management were unclear to the researchers. And the difficulty many firms have experienced in effecting a liaison between their research groups and top management makes it clear that relationships between scientists and businessmen are still very much up in the air.

SCIENTISTS AS MANAGERS

What with incompleteness of data, questions of distinction between engineers and physical scientists, and so forth, it is difficult to make sweeping generalizations about scientists and technical personnel as managers. What evidence is available, however, suggests four tentative conclusions:

1. The strong identification of scientists with their profession, their bristling dissatisfaction when not accorded professional recognition, and the late or absent attempts at integration of technical and managerial orientations all suggest that scientists in top management will continue to think of themselves as *scientists first and managers second*.

2. The good communication and teamwork among scientists, combined with the poor communication between scientists and businessmen, will produce a situation where scientists will, to suit themselves, make management *more scientific than necessary*. We can, for example, expect a significant increase in operations research activities, although the value of operations research is greatest where experience is lacking, as in the development of new military weapons. Some have estimated that operations research can increase the effectiveness of decision-making in the face of the unknown by about 50 per cent, but by only about 8 per cent in situations where managerial experience is available.

3. The calm, crisis-free atmosphere of a science that is used to negative results will be both a bane and a boon to management. In business there *are* crises, and managers must react to them as such. A recent report in *Business Week*, for example, highlighted the troubles that one company ran into when engineers got control and maintained exceptionally high product quality at the cost of near financial ruin.

4. The lack of basic personality differences between scientists and others suggests that, with proper training, there is no reason why they would not be willing or able to learn the communication skills and develop the managerial ability required for maximum success as managers.

Over all, the net impact of the growing number of scientists in top management will be to make management more scientific. There will, of course, be problems, such as the danger of freezing out experienced business judgment and the risk of losing opportunities or courting disaster because of the scientists' more pronounced lack of sensitivity to acute business conditions. Yet these dangers can be minimized if training is made available to help scientists communicate with businessmen and develop the broader outlook that is characteristic of the most successful practitioners of management today.

THE SAGES do not believe that making no mistakes is a blessing. They believe, rather, that the great virtue of man lies in his ability to correct his mistakes and continually make a new man of himself.

—Wang Yang-Ming

ists,
and
suit
We
arch
here
wea-
the
a by
here

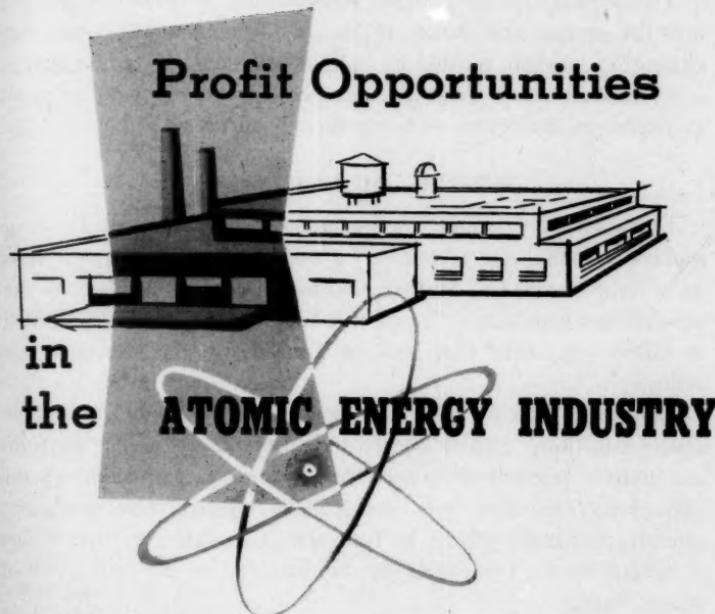
used
ment.
n as
ghted
ntrol
st of

ntists
ason
ation
num

ts in
There
out
nities
lack
can
com-
that
ment

They
rect
Ming

IT REVIEW



■ **Philip Marvin**

Division Manager

Research and Development Division, AMA

HERE ARE FEW SUBJECTS that executives hear more about and know less about than business opportunities associated with the development of atomic energy. Businessmen are, of course, aware that a new era has already commenced—but an aura of glamor and the need for a certain amount of security-prompted secrecy have combined to shroud the practical realities of advances in atomic technology.

Although executives often find it hard to get accurate information, the fact that some companies are prospering proves that diligence pays off. As a basis for executive action, business managers must have specific data at their disposal. To appraise business prospects, they need answers to two important questions:

- What's in it for my company?
- How do I get started?

The answers to these major questions are obtained by probing into the present and future of the markets, manpower, and machinery of nuclear technology and its commercial counterparts—a search that serves to orient management thinking and to guide management strategy in planning future courses of action.

ENTERING THE NEW MARKET

Entry into the atomic energy industry need not involve large outlays of capital and manpower; present products could well serve as a stepping-stone to further ventures. Building business in this new market with today's "bread-and-butter" items is a sound course to follow—a course that lays the groundwork for growth in the industry.

Companies that are now participating in the atomic energy industry constitute a panorama of American industry. All segments are actively represented: construction, mining, petroleum, chemicals, plastics, machine tools, electrical instruments, metal producers, aircraft, and many others. In fact, almost anything industry makes is needed by the companies directly involved in the production of atomic energy.

Some idea of the present size of the atomic energy industry can be gained by a look at the statistics, which indicate that more than 100,000 men and women are working in the industry. The number of access permits for restricted data runs in the neighborhood of 1,500, and some 4,000 firms use isotopes in their work.

Present applications of atomic energy include weapons systems, industrial and medical uses of isotopes, and power plants that can propel submarines, ships, and airplanes, run factories, and light homes. Of these, commercial power generation represents the primary market in the foreseeable future, apart from weapons systems applications.

NUCLEAR POWER PLANTS

At present, over 100 companies are engaged directly and indirectly in developing 18 nuclear power plants. Some of the major developments proposed, in construction, or in operation are listed in Figure 1.

These developments constitute a big business, and an expanding

FIGURE 1
PRESENT OR PROPOSED ATOMIC ENERGY DEVELOPMENTS

Company or Group	Capacity (kw)	Location	In Operation by
Carolina-Va. Nuclear Power Assoc.	17,000	—	1962
Chugach Elec. Assoc.	10,000	Alaska	1962
City of Piqua, Ohio	12,500	Ohio	1961
Commonwealth Edison Grp.	180,000	Illinois	1960
Consolidated Edison of N.Y.	275,000	New York	1960
Consumers Public Power District of Nebraska	75,000	Nebraska	1962
Detroit Edison Group	100,000	Michigan	1960
Duquesne Light	60,000	Pennsylvania	1957
Florida West Coast Nuclear Group-East-Central Nuclear Group	50,000	Florida	1963
Pacific G.&E.-Gen. Elec.	5,000	California	1957
Pennsylvania Power & Lt.	150,000	Pennsylvania	1963
Rural Coop. Power Assoc.	22,000	Minnesota	1959
So. California Edison	6,500	California	1957
Wolverine Electric Coop.	10,000	Michigan	1962
Yankee Atomic Electric	134,000	Massachusetts	1960

one. The plants will cost more than a half-billion dollars and will produce an estimated 1.5 million kilowatts. Since atomic power installations will cost approximately \$450 per kilowatt, compared with an estimated \$150 per kilowatt for presently installed thermal capacity, they must be regarded as experimental operations at present. In this country, atomic power won't be competitive with other sources for some years to come. In Europe and Japan opportunities are greater, and the market in these countries may well amount to 15 million kilowatts of installed capacity within the next ten years. U.S. capacity, in contrast, probably will not exceed 3 million kilowatts.

Today's nuclear power plants differ from conventional thermal plants in one respect only: The steam that drives a conventional turbine comes from a nuclear boiler. Those who want to set their sights on new business opportunities inherent in atomic power must concern themselves with this nuclear boiler. At present, there is nothing unique about the rest of the system; only 25 per cent of the total cost of an atomic power plant can be said to fall into a special atomic equipment category. The remainder of the cost is distributed among the conventional items of the thermal power plant, with approximately 50 per cent of the total cost allocated to construction and the remaining 25 per cent to electrical generation equipment and accessories.

Atomic Energy Commission experience indicates that the cost of developing a full-scale prototype power plant, including the reactor, runs as high as \$100 million. Half of this is absorbed in the development of the laboratory scale operation that must necessarily precede construction of the prototype.

COURSE OF ACTION

Any new commercial opportunity combines opportunity for profits with risk and uncertainty, and atomic energy utilization is no exception. In determining action to be taken, answers to these questions will prove helpful.

- Would stockholders regard this venture favorably?
- What talent is available?
- How much time can be devoted to this program?
- Are sufficient funds available?
- Would the present product line be sensitive to this venture?
- Can the sales organization cope with added work loads?
- Are production facilities adaptable?
- Is the technical organization flexible?
- Are management objectives in harmony with the proposed undertaking?

The plan of action for undertaking any new venture should anticipate the development of unforeseeable events. Organizational

thermal
national
t their
power
there
r cent
ll into
cost is
power
located
genera-
cost of
reactor,
the de-
essarily
ity for
ation is
to these
nture?
s?
proposed
e should
izational
MENT REVIEW

patterns should be flexible and adaptable to growth; technological strength is a requisite. There is nothing unique about these requirements for entry into the atomic energy industry—they apply equally to any new venture.

PROFIT OPPORTUNITIES IN ATOMIC ENERGY

There are no quick profits to be derived from the construction of special equipment for the nuclear power field. By its very nature it is job-shop work, and all the problems that characterize job-shop work are present to an aggravated degree: specifications change as work proceeds; tolerances are tight; research and engineering costs are high; materials of construction are unfamiliar; unforeseen hazards exist; estimating is difficult; delivery times are short. The incentive that spurs interest and action must be a desire to be part of the profitable future that may be a quarter of a century away.

There is, however, another facet of atomic power development that can be productive of immediate profits: selling items in present product lines that fit into the specialty requirements of this new and growing industry.

Any new industry needs many conventional products. Businessmen are often tardy in exercising initiative in learning about the needs of new industries that result from technological development, and many fail to speculate on ways their existing products might be used by these newer businesses. To sell your product in any market, you must know who can use it and how it will be used. The atomic energy industry is no exception.

FINDING YOUR PLACE IN THE MARKET

It doesn't take any specialized knowledge to set programs into motion designed to tap this new market—nor does this job call for reorganization of the company.

The problem of finding out how present products might be used commences with a study of reactor operation. Any major metropolitan library can provide readable books that will reveal how motors, pumps, valves, electrical controls, and pressure vessels, to name only a few of countless specialty items, are used by the reactor contractors. Contractors' purchasing agents are usually willing to be of assistance.

The Office of Industrial Development of the Atomic Energy Commission, Washington, D. C., stands ready to help businessmen. Operations offices, where the market for your product can be explored with a representative of the Atomic Energy Commission, are strategically located in many cities, and each of these offices is manned by specialists. (See Figure 2.)

FIGURE 2
AEC OPERATIONS OFFICES

Albuquerque	P.O. Box 5400 Albuquerque, New Mexico
Chicago	P.O. Box 59 Lemont, Illinois
Grand Junction	Grand Junction, Colorado
Hanford	P.O. Box 550 Richland, Washington
Idaho	P.O. Box 1221 Idaho Falls, Idaho
New York	70 Columbus Avenue New York 23, New York
Oak Ridge	P.O. Box E Oak Ridge, Tennessee
San Francisco	518 17th Street Oakland 12, California
Savannah River	P.O. Box A Aiken, South Carolina
Schenectady	P.O. Box 1069 Schenectady, New York

The Atomic Energy Commission publishes a *Guide to Atomic Energy Literature for the Civilian Application Program*, TID- 4575, available without cost. In addition, both the commission and educational institutions conduct special training programs that provide additional aid in furthering an understanding of atomic energy and its utilization. Information relative to these programs is available from the commission and its operations offices.

These sources will provide valuable information to help manage-
(Continued on page 88)

BUSINESS DIGESTS OF THE MONTH



Getting Ready for the Upturn

By Robinson Newcomb

Condensed from Nation's Business

THE COMPANIES that will bounce back fastest at the end of the recession are the ones that are preparing now for the upturn. In considering ways to cut costs and increase efficiency, these companies are applying long-range criteria to each proposal:

"Will it help our company recover more quickly than other companies when business picks up? Will it result in the loss of more in profits next year than it is saving this year?"

Asking these questions can stop a company from making ill-advised moves in such areas as inventories, cash position, equipment, and hiring practices. Indeed, companies that consider the future as well as the present before taking action in these areas may find that the current downturn is actually an opportunity.

1. *Inventories.* Probably the first rule for riding out a recession is that inventories should be maintained at

levels that will be adequate for an upturn. Failure to observe this rule cost companies untold profits in 1949 and 1954.

Companies may be tempted to cut inventories sharply, relying on fabricators or suppliers for prompt deliveries of any items that may be needed. This enables a company to build up cash reserves and reduce short-term obligations, and it helps trim costs at a time when income from profits is under pressure.

But when recovery begins to boost sales, prompt deliveries will become a thing of the past. The company with inadequate inventories may have to turn orders down because materials and equipment to handle them will not be available on time. The scramble for supplies may be even greater than it was four years ago, following the 1953 recession.

2. *Cash position.* A minor recess-

Nation's Business (March, 1958), © 1958 by Nation's Business—the Chamber of Commerce of the United States.

sion offers many companies an opportunity to improve their cash position as well as their capital structure, because both short- and long-term interest rates tend to drop during recessions. Corporations that use bank loans, bonds, or other forms of borrowing may therefore find the recession a good time to consider changing or increasing their indebtedness.

Unfortunately, the practice of deliberately planning financing to take advantage of fluctuations in the cost of money is not as widespread as it should be. This failure to buy money at the best rates is in sharp contrast to the policy of buying goods at the best possible prices. Companies still tend to build plants after demand becomes insistent rather than scheduling them so that they will be ready when demand begins to boom. Financing should be scheduled over several periods ahead, and the amount of long-term funds to be raised should be adjusted according to the cost of money and the amounts of money that will be needed in the immediate future.

3. *Equipment.* Recession offers a particularly good opportunity to improve equipment, since prices of machinery and equipment tend to go up in good times and come down more rapidly than some other items during business declines. But in considering the purchase of equipment during recessions, too many companies go by the current profit picture rather than by the effect of expenditures on future profits. Many capital investment opportunities are missed in slack times because the money is not available from internal sources, even though it may be available from

external sources at low interest rates.

During a recession, it might be feasible to make purchase contracts that call for delivery a considerable time in advance. Such contracts would not require the immediate advance of capital yet would insure the availability of the more efficient equipment when it is needed, and at an appreciably lower price than would have to be paid later.

4. *Hiring practices.* A recession also presents an opportunity to obtain the best talent available. Business learned in 1949 that it does not pay to give up good employees even if they are not currently being utilized to the utmost. The cost of replacing good talent usually turns out to be greater than the savings gained from cutting staff at slack times.

The corollary has been learned less well: The time to get the best men does not coincide with the time of maximum employment. Last June, graduates of many schools were able to choose from among a half dozen or more companies, but the choices will be fewer this June. The companies that go after trained men in the colleges and that are constantly on the lookout for better than average talent elsewhere in 1958 will probably find themselves far ahead of the competition in 1959. But if they wait until business turns up, they will have to lure talented employees from other companies with the bait of much higher salaries.

Thus, upgrading company manpower this year—though it requires an initial investment—can produce high yields when the business upturn creates a demand for competent personnel. ♦

If the proponents of mass selling are correct, traditional methods of retailing may have to undergo radical changes . . .

Revolution in Retailing

Condensed from Printers' Ink

Is our present distribution system outmoded, no longer able to move merchandise rapidly enough to keep up with our high-capacity, mass-production economy? Does the selling arm of U. S. industry operate at too low a volume of turnover and too high a margin of profit?

Such questions are being asked more sharply these days, as consumers begin to shop cautiously on a price basis and as more of the country's "fair trade" manufacturers give in to discounting. Some economists, in fact, believe that our entire distribution system is at a historic turning point.

The battle lines have been drawn between proponents of a streamlined selling system with low costs, low margins, low prices, and a built-in velocity turnover, and defenders of the traditional marketing system operating on high costs, high margins, high prices, and slow turnover.

One of the most vocal leaders of the mass-selling contingent is Stephen Masters, president of the first and one of the biggest discount businesses—Masters, Inc. Currently his volume of sales is at the rate of \$50 million a year. He predicts he

will hit \$75 million by the end of 1958.

Masters argues that his kind of selling could lift the U.S. economy out of its current recession by moving bigger volumes of merchandise. Factories would be kept busy, and the resulting high employment would in turn put more real money into circulation.

If Masters is right, then the U.S. is now at a point where it must lift its economy by deflation, and the entire distribution arm of American business will have to learn to function at a lower margin of profit.

Masters has been telling other businessmen — even competitors — how he runs his business in order to dispel the belief held by some that his kind of operation is somehow "subversive," or at least not quite honest. What he wants to get across is the idea that the "Masters way" of selling is not only legitimate, but is a harbinger of mass U.S. selling in the future.

Speaking before a business group recently, Masters maintained that "the high-margin retailers have not been able to move the mass tonnage of goods America produces. They

Printers' Ink (March 14, 1958), © 1958 by Printers' Ink Publishing Company, Inc.

continue to give up big chunks of their volume to low-margin mass retailers, as more and more mass manufacturers realize that what is mass-produced must be mass-sold."

There is strong evidence to back Masters up. A few years ago, for example, most of the buyers at a housewares show would have come from department stores. At the January housewares show this year, however, the department-store buyers were outnumbered by buyers from stores that use low-margin, high-velocity turnover. These stores included discount houses, supermarkets, drug and variety stores, mail-order houses, and club-plan operators.

There is no doubt that consumers like low-margin "discount" selling. In a recent *Printers' Ink* survey of buying and prices, dealers across the country reported that consumers have been flocking to local discount houses and avoiding conventional stores.

There is much disagreement over just what a discount house is and what it is not. Masters points out that every retailer—including the promotional department store—discounts on some items some of the time. He, like conventional stores, does not mark up at the same rate for every item he sells. But the difference between the conventional store and the "true discount" is that the latter discounts some amount on every item all the time, always selling below the manufacturer's list price, or below competitive prices.

Masters says the conventional middle-sized retail or department store is doomed because it is inefficient as it operates today. It costs con-

ventional stores an average \$34.60 to ring up \$100 worth of merchandise, while it costs Masters \$11.90. The average department store has four turnovers of merchandise a year while he has 14; it sells \$85 worth of merchandise per square foot while he sells \$1,000 worth.

His low costs don't come from low salaries, although he spends only 6.8 per cent of sales on salaries while the average comparable department store spends 18.4 per cent. Masters' salaries are high and his employees are unionized. But he has pared "unnecessary" personnel; 92 per cent of his employees are selling on the floor, while in the average department store less than 50 per cent sell directly. He has a lower rent cost (\$1.80 per square foot to the department store's \$2.90), not because he is in lower rent areas but because he cuts down costly display space.

These savings are based on Masters' operating principle that national advertising presells customers on brands. He feels it is needless and expensive duplication for department stores to spend money on display space and on "excessive salaries to top executives, too many buyers, merchandising managers and such frills."

Masters' advertising costs are equal to those of department stores, but his delivery service costs are zero to the department store's 1.5 per cent of sales. He calls conventional store service policies out of date. At Masters customers can return merchandise, place individual orders, get credit and delivery. But he tags his merchandise with a base price.

For services he adds a charge to cover the cost.

Department store contracts with the United Parcel Service, Masters points out, stipulate that the store pay United Parcel a fee for every store sale over \$3.00, even when the customer carries the purchase home himself. This cost must be added to all merchandise, whether delivered or not. Masters refuses to join in

this contract. Customers who carry their own packages pay no delivery charge. Those who want delivery pay the full delivery cost.

Reflecting on his success with the mass-selling technique, Masters is confident that he is setting a trend that will persist and gain strength. "We are the dynamic forces who will be giants of retailing in the very near future," he says. ♦

Magnetic Tape: Industry's New Jack-of-all-Trades

INDUSTRY is making more and more use of the infallible memory of magnetic recording tape in improving operations and cutting costs. From testing company products to promoting employee safety, ingenious applications of magnetic tape have paid off for an increasing number of companies. Here are some outstanding examples:

Inventory checking. Carrying a portable tape recorder, a checker moves along warehouse aisles and calls off the tally into his microphone. The tape is sent to the key punch room where the information is transcribed onto punch cards. By using tape, this company has cut inventory time one-third.

Recording time and motion data. Using tape for this job saves time because the analyst does not have to interrupt his observation of the operation to jot data down on forms.

Checking product performance. At General Electric, refrigerator noises caused by poor assembly are taped and replayed for workers on the assembly line. This method of dramatizing the importance of careful assembly has helped cut rejects substantially.

Giving instructions on work procedures. One western firm reports it has saved \$50,000 a year and cut production time by having a tape recorder play instructions to workers testing electronics apparatus. Under the old system, each tester had to have a checker read him the long, detailed list of test points and inspection criteria.

Cutting paperwork. At the main warehouse of the Red Owl Stores, Inc. (Hopkins, Minn.), merchandise coming in was held up at the receiving dock while the clerk wrote up lengthy receiving reports. A microphone was installed on the dock, connected to a tape recorder in the office. When merchandise arrives now, the dock clerk merely reads the order information into his microphone, and a stenographer later transcribes the recorded data in the office. The company estimates that it now takes the dock clerk only 15 minutes to handle the amount of incoming merchandise that formerly took three hours.

—*Mill & Factory* 2/58



Widely heralded as a year of labor-management conflict, 1958 may not live up to its advance billing . . .

Will This Be a Strike Year?

By Roscoe Born

Condensed from *The Wall Street Journal*

HARDER TIMES have softened labor's determination at the bargaining table and—with a few exceptions that may prove spectacular—1958 won't live up to its advance billing as the year of strike warfare.

Publicly, of course, the nation's labor leaders say they're still resolved to get more money, recession or no. But many rank-and-file union members, worried by rising unemployment and shortened work weeks, just aren't as eager as they were to join picket lines. And many practical union negotiators realize some employers simply can't fork over more money.

"It's the old blood-and-turnip," says one veteran bargainer. "If the company doesn't have it, we can't get it."

The uncertain outlook in the textile industry already has caused the Textile Workers Union of America to think twice about its 200 contracts with cotton-rayon mills which expired April 15. The union asked for nothing new and settled for a one-year extension of current contracts.

In this year's biggest union-management bout, the talks now underway between Walter Reuther's United Auto Workers and the auto manufacturers, most observers agree the union will get much less than the profit-sharing plan Mr. Reuther is asking for. Nor is the union's strike threat likely to be fulfilled. Union men well know the industry has enough unsold cars on hand to last some three months at the current sales pace.

The Wall Street Journal (March 31, 1958), © 1958 by Dow Jones & Company, Inc.

The recession also promises to hamper labor in major 1958 negotiations in other industries: aircraft, cement, telephones, farm equipment, oil, paper, rubber, glass, and electrical manufacturing. In many cases, the downturn is causing unions to include "recession specials" in this year's demands. Among them are new or increased severance pay for laid-off workers, new or increased supplemental unemployment benefits financed by employers, and clauses that are designed to prevent layoffs.

In the petroleum industry, the Oil, Chemical, and Atomic Workers Union has decided not to approve any contracts unless they include so-called anti-layoff clauses. One such clause would provide a "substantial" payment for any laid-off worker. Another would provide that if an employer lays off 5 per cent of his work force either at once or over a year's time, he must notify the union four months in advance of the layoffs, to allow contract reopening on wages and hours. The union has nearly 1,400 contracts up for negotiation this year.

James Carey's Electrical Workers Union is coming up with a new anti-recession wrinkle: a plan that would make a worker eligible for some supplemental unemployment benefits when working only part-time, instead of just when he's laid off. The union is demanding this plan in negotiations now beginning with General Motors, as an improvement on an existing SUB provision. And it will seek such a plan in later talks with Radio Corp. of America, Westinghouse Electric Corp., and General

Electric Co., which now have no SUB plans.

The change in the bargaining climate is reflected by no less an authority than Joseph F. Finnegan, the government's chief labor mediator. As recently as February, Mr. Finnegan warned in closed-door Congressional hearings: "There is practically unanimous agreement on the part of labor and management that we are in for a bit of a Donnybrook. It has all the makings of more industrial conflict than we have had for the last five to seven years."

But after a month's survey of the soundings of his 210 mediators across the country, Mr. Finnegan now says the recession has made workers realize "the stuff isn't going to shake off the trees as readily as before." He adds: "They are reluctant to hit the bricks. On the basis of our experience so far, we anticipate fewer strikes than last year." And last year, according to Labor Department figures, was more peaceful than any other postwar year.

All this doesn't mean labor will be in a state of paralysis. For one thing, more than 4 million workers will get automatic pay increases in 1958 as a result of long-term contracts negotiated in rosier times. These raises, most of them running seven to ten cents an hour, will put pressure on this year's negotiators to try to match them. Then, too, top echelon labor leaders declare they have almost a patriotic duty "to help end the recession" by putting more money in workers' hands.

"Economic slackening makes it doubly imperative that unions gain sizable increases to bolster consumer

buying power," the AFL-CIO has officially proclaimed.

But a union official notes: "That doesn't mean you get more money regardless of the circumstances. You get it where you can." Says another: "Unions will be tough where industry can take it and easy where it can't."

The UAW provides a ready example of this adjustable outlook. Union negotiators won a 10-cent hourly wage boost early last March from Minneapolis-Moline Co. but agreed to defer the effective date

until November. The reason: poor business conditions.

But the same union is bristling against another farm equipment maker, J. I. Case Co., in Chicago. This company has diversified outside the farm machine field and is doing well within it. It earned a profit of \$1.3 million last year, has a backlog of \$150 million in orders, and its plants are running at near capacity. So the UAW is seeking a 33-cent hourly wage increase and is threatening to strike if necessary to get it. ♦

No Pie in the Sky

THE PICKINGS WON'T BE SO EASY for the nation's 300,000 job-seeking college seniors this year. A *New York Herald Tribune* campus survey shows that 1958 promises to be the toughest year for new job-hunters since 1949. Employers are choosier and they're cutting down on campus recruiting, even of engineers and scientists.

Paradoxically, even as jobs come harder starting pay is staying the same or actually rising slightly above 1957 levels.

An example of the cutdown in recruiting is provided at New York's Columbia University. Out of some 350 companies that had originally scheduled recruiters' visits, 51 have canceled their visits. These included railroads, steel companies, airframe manufacturers, and electronics firms. Moreover, most of those industry recruiters who do show up at Columbia have lower quotas. Samuel Beach, the university's placement director, estimates that over-all nontechnical hiring requirements are down 25 per cent.

At Carnegie Tech, 50 out of 425 companies have canceled recruiting visits to the school's engineer-crammed campus. Placement director J. Dennis Ryan reports, "I'd guess quotas have been cut 25 to 55 per cent. Normally we expect to place all of our engineering and science seniors by June. This year, we expect to place maybe 70 per cent, at an average \$465 monthly salary."

The reversal of recruiting trends is having a noticeable effect on students. Says Andre Beaumont, placement director at New York University, "They're signing up for more interviews—especially the engineers—and giving more attention to government agencies, which they ignored in the past. Company interviewers say they used to feel they were being interviewed; now it's the other way around."

—Peter Braestrup in *The New York Herald Tribune* 2/24/58

The Big Swing in Inventories

The collapse of inventory demand is aggravating the business slump now as it has often done in the past, but new control techniques may soon make inventories a stabilizing influence on the economy . . .

By Charles E. Silberman and Todd May

Condensed from *Fortune*

NOT FOR 20 YEARS—not since the 1937 recession—has the usually arid subject of business inventories been a cause for such deep concern to businessmen, economists, and government officials. The rapid and rather mysterious fall in industrial production has stemmed almost entirely from a sudden collapse of business demand for inventory. Final purchases of goods have eased only \$4 billion a year, or 2 per cent, since the third quarter of 1957, but there has been a decline of at least twice that much in demand for inventory. The switch from inventory accumulation to liquidation, therefore, accounts for two-thirds or more of the decline in production.

Liquidation ran at a rate of \$3 billion to \$4 billion per year in the fourth quarter of 1957 and may run to \$6 billion in the first quarter of 1958. Steel companies have been the hardest hit; steel sales have been running as much as 25 to 35 per cent below the levels the steel companies themselves had forecast only two months before. No wonder that businessmen began to be haunted by the ghosts of '29 and '37.

Understandable as they are, such

fears are not well founded. The inventory turnaround is, of course, a fairly normal cyclical adjustment; the suddenness of this turn is due to a congeries of special circumstances and may actually temper rather than aggravate the general business decline. Inventories are not unduly high in relation to current sales, and the current liquidation (as well as the accumulation that preceded it) is extremely tame by the standards of the '29 and '37 depressions. For a variety of reasons, liquidation will gradually slow down over the rest of this year. Paradoxically, the speed with which business switched from accumulation to liquidation is one of the most hopeful portents that the inventory adjustment will be quite short. And over the long run, as will be shown later in this article, new management techniques for controlling inventory should reduce substantially the volatility of inventory demand and minimize its role in triggering or magnifying a decline.

Recovery is the more probable because inventory cycles tend to be brief and self-reversing unless there is a failure of total demand, or unless the liquidation is delayed too

Fortune (March, 1958), © 1958 by Time, Inc.

long. In this cycle, however, inventory liquidation—if anything—*anticipated* rather than lagged behind the decline in final purchases. The ratio of inventory to final sales actually held stable in the fourth quarter and may be falling now.

So far, moreover, there has been little sign of any failure of total demand. On the contrary, final sales were off only 1 per cent in the last quarter of 1957 and about the same in this quarter, and should turn up soon. Demand for capital goods will continue to fall, of course, as will exports, but these declines will be partly offset by a rise in housing and non-defense government spending. And the expected rise in defense spending should tip this uneasy balance upward and so permit a rise in consumer spending. The economy has suffered an inventory letdown in the course of a transition toward more government and less investment spending. And so the outlook is for a steady reduction in the rate of inventory liquidation, with a shift toward moderate accumulation coming around the turn of the year.

Despite the recent volatility of inventory demand, there is substantial evidence that in the future inventory movements may come to play a much less unsettling role in the economy. For the application of operations research and other scientific management techniques is revolutionizing both inventory control and production planning. The starting point of the new approach, as one management consultant puts it, is "the recognition that inventories are not simply an annoying cost that those damned clerks ought to do something about,"

but an asset that must be managed as efficiently as a new plant or machine.

One general approach is to balance the costs of holding too much inventory against the costs of holding too little. The latter includes the loss of customer good will when finished goods are out of stock; the costs of an interrupted production when stocks of raw materials run out; or the heavy expenses of overtime, air freight, expediters, etc., incurred in a frenzied attempt to fill orders at the last minute.

Interestingly, firms whose stocks are too large also seem to have the most frequent "stockouts." Several years ago, for example, Standard Oil of Ohio found that its inventories of packaged products—some 4,000 in all—were badly maladjusted. Although field warehouses showed a ninety-day average supply of goods, they were frequently out of stock on fast-moving items and at the same time might have as much as a ten-year supply of slow movers. A thoroughly revised inventory control system reduced total packaged-product inventories by 30 per cent.

A number of leading manufacturers are attacking the inventory problem on a very much broader front by integrating production scheduling and inventory control into a single decision-making system. The essence of these new approaches is a comparison of the costs of increasing or decreasing inventory when sales fluctuate vs. the costs of increasing or decreasing production. The latter includes—besides the direct production costs themselves—the costs of hiring and firing workers (interviews,

severance pay, higher unemployment-insurance taxes, etc.).

Once these costs have been identified, the problem is to find the exact schedule of production and inventories that minimizes total—not just inventory—costs. Pittsburgh Plate Glass has been using in one of its paint factories an approach developed by Professors Holt, Modigliani, Muth, and Simon of Carnegie Tech, and is tooling up to adopt it in five paint plants in conjunction with an electronic-computer installation. The company expects to reduce its inventories substantially. Westinghouse, General Electric, Du Pont, Monsanto, General Mills, Cutler-Hammer, and Procter & Gamble have all been working along similar lines.

Besides lowering the level, the new approach tends to reduce wide swings in inventory as well. For it is designed to make sure, first, that production is *not* altered appreciably in response to purely random fluctuations that don't affect the true sales trend, and second, that production *does* respond promptly and in the proper amount to actual changes in the sales trend.

The approach depends, of course, on accurate sales forecasting of each individual product or item. For this, it is necessary to speed up the flow of sales data (and improve its accuracy) and to reduce the reaction time.

One way of improving the flow of information is for the manufacturer to take over a part of the distribution function himself, as General Electric is doing with its appliances. Another technique is to get spot data on sales trends through the use of

sampling theory. Maiden Form Co., a large manufacturer of brassieres, is seriously considering setting up a retail store of its own to provide sample data on sales trends. By using spot-retail-sales data, a large publisher has been able to reduce over-production of books from an average 30 per cent per volume to only 7 per cent, thereby cutting inventories in half.

Where the volatility of final sales precludes accurate forecasting, the problem frequently can be solved simply by pushing the forecast one stage back in the production process. GE discovered, for example, that where it was impossible to forecast accurately the sales of many final products, it frequently *was* possible to forecast very closely demand for the much smaller number of components from which the final products were made. It was possible to schedule production of the components, therefore, with some confidence; then, by carrying inventories of the components, the final assemblies could be handled in short order as sales came in.

And so a substantial reduction in the inventory-sales ratio can be expected over the next ten to twenty years—perhaps as much as in the decade of the 1920's, when the ratio fell by 15 per cent. On the basis of current experience, a decline of at least 1 per cent a year seems likely.

As long as consumers are free to choose, of course, and as long as business firms are free to introduce new products and new processes, inventories are bound to fluctuate. But better inventory control can go far toward ensuring that a free economy can also be stable. ♦

haged
ma-
bal-
much
olding
e loss
nished
sts of
when
ut; or
e, air
red in
ers at

stocks
ve the
Several
ard Oil
ries of
000 in
d. Al-
wed a
goods,
f stock
at the
ch as a
vers. A
control
ed-prod-
nt.
ufac-
try prob-
er front
cheduling
a single
essence
a com-
asing or
n sales
increasing
the latter
s produc-
costs of
terviews,



Who Speaks for Small Business?

By Elton T. Barrett

Condensed from American Machinist

THERE IS NO SHORTAGE of groups—both business associations and government bureaus—that profess to speak for small business. But do any of them really speak with the voice of small business?

Small business has few spokesmen of its own because almost every small businessman is too busy running his enterprise to take the time to broadcast his point of view. Here I would like to set forth the thoughts of only one small businessman—with the hunch that there are others like myself who belong to none of the groups that persist in speaking for us.

Every day, literature on small business crosses my desk. Much of it is generated by the government, much of it by voluntary associations set up to consider and be helpful with the problems of small business. Most of these pieces are based on the questionable assumption that small business is a fragile social organism that must be given special care and nourishment, lest it perish.

Small businesses are run by businessmen who are instantly sensitive to changing conditions, and who have the power to change quickly the directions of their businesses. Daily, they solve complex problems of labor relations, financing, and production techniques. They neither need, want, nor expect special consideration from the government or anyone else in their fight for economic survival. What they get, they are willing to pay for—and what they sell, they will get paid for.

It is true that many thousands of small businesses fail each year. Usually, a small business fails because its management couldn't or didn't juggle fast enough all the problems that must be juggled to produce a profit.

To make a profit, the business must have discovered a service that others desire; it must have devised means to provide this service at a competitive price; and it must let potential customers know the service is

American Machinist (April 7, 1958), © 1958 by McGraw-Hill Publishing Co., Inc.

available. A business that does not meet these requirements will not long survive.

Nor should it. Though not a happy thing, failure seems to be an essential ingredient of our free business system. If we remove the freedom to go broke, how else can we test the soundness of the particular business actions we select? How else can we test the value of the service we render?

Far from being a delicate organism, small business is a hardy social institution that would not be easy to stamp out. For example, a small business can usually react more quickly to a new situation than can a large business. In our small company, we frequently accept an order, manufacture an item, and ship it in less time than it would take some large companies to even get started on the necessary paperwork.

What about the frequently heard statement that small business cannot compete because big business pours millions of dollars into research and development? A small business can compete here, too, because of the more limited scope of its activities. The small business can pile its development money just as high—over a smaller area—as the big company.

What about the contention that giant patent pools of big business stifle and suppress small business? The patent system has been under fire in the courts for more than two decades; underlying many of their decisions seems to be a belief that the weakening of the patent system is of benefit to small business and the public.

Actually, weakening the patent

system would harm small business. Could a small business afford to invest in a new development (with the likelihood that it must establish new marketing channels after the development has proved successful) if a big business with already established marketing channels could copy the new product with impunity? Most big businesses do not expect to make a profit from patents; in most cases, they acquire patents for defensive reasons.

What small business asks of the patent laws is a sound and fair system for protecting new developments. With this protection, small business can compete in the business of making inventions.

Can a small business acquire competent employees against the competition of big business? Big business offers sick benefits, insurance plans, retirement income, and many other extra benefits—all backed by the financial security of the company.

But there are many in whose veins flows the entrepreneur's blood, who want something very different from maximum security. These are the people who want a chance to contribute to the success of a business under circumstances where the results of their efforts are readily detectable and where they can share in that success. Small business can offer this incentive.

In our small business, we think it is of great advantage to let all our employees know as much about the business as we can. We share with our employees the rough jolts of the cash squeeze, the order we almost got, the contract on which we have lost money. We also share with the

employees the news of a fat new order, a profitable month, future hopes, and general plans. All our financial records (except individual salaries) are open to all our employees all the time.

In a small business, "dead wood" is more readily detectable than in a big business, and fellow workers have a more direct interest in getting rid of it. Small business management has to "put its men in the field" with

minimum training, because it cannot afford the long years of training provided by large companies. The man who cannot assume increasing responsibilities is soon weeded out.

Small business doesn't want any unnecessary road blocks thrown in its path, but it doesn't want or need special help, either. We are a sturdy lot, we small businessmen, and we can meet changing conditions with surprising agility and acumen. ♦

Doing Business on the Cuff

BUSINESSMEN, who taught the consumer to "buy now, pay later," are learning to live on the installment plan themselves these days. They are steadily increasing their use of monthly payment programs to buy machinery and other equipment, to augment working capital, to buy into, expand, or diversify a going concern, or to establish a new business.

Although industrial time payment plans were used as early as the 1920's, they have mushroomed recently because of these trends:

Larger unit size. Even smaller businesses require more space, more fixtures, and more inventory than their counterparts of a generation ago.

Greater use of capital equipment. As machinery has been substituted for manpower, the businessman's need for intermediate and long-term funds has increased.

Aggressive installment selling by equipment makers. In recent years, more items that manufacturers sell directly to business customers, such as machine tools and printing presses, have been marketed on time. Nationwide sales finance companies have spurred this trend as a result of their efforts to diversify.

Although no figures are available on the over-all growth of business installment credit, some indication can be obtained from the fact that C.I.T. Financial Corp., a leading sales finance company, showed a 28 per cent growth in "other" installment receivables—largely industrial equipment loans—from \$330 million at the end of 1956 to \$422 million at the end of 1957.

What kind of concerns borrow on the installment plan? Primarily smaller businesses, since larger companies have a greater variety of financing methods available to them. One recent survey gave this breakdown of installment plan users: business and personal service, 23 per cent; retail merchandise, 21 per cent; retail food, 17 per cent; manufacturing, 9 per cent; and professional service, 8 per cent. Other categories made up the rest.

—Albert L. Kraus in *The New York Times* 3/9/58

cannot
g pro-
e man
ng re-
out.
at any
own in
r need
sturdy
nd we
s with
◆

Product Styling:



Is This Change Necessary?

By Richard S. Latham

Condensed from Industrial Design

THE FURIOUSLY growing trend toward constant restyling of all types of products is causing an increasing number of people to wonder uneasily if we have reached the point of diminishing returns.

There can be no question that change is part and parcel of U.S. industry. We have come to believe that new things are good things. Yet the fact is that in mass production the basis of monetary success is often in conflict with change. For the sake of efficiency, the facilities of mass production need to turn out the same things for continuous periods of time. They need to refine operations to show real gains in efficiency. Constant change in the "thing" to be produced works against efficiency and creates problems, and particularly with such complex modern appurtenances as cars, appliances, and tools, the products themselves need prolonged use to be perfected.

On the other hand, it may no longer be true that one of the most inefficient aspects of product change is its cost in new tools. Recently a major appliance executive pointed out in a speech that production tooling actually wears out on a cyclical basis; why, then, shouldn't it be replaced with tools that produce a different product, if the new one seems to offer more? And why not introduce refinements and innovations at these times?

There is, of course, nothing inherently wrong with the idea of style change *per se*, provided it is applied where it belongs. It works quite successfully in soft goods and women's clothing, for instance, where it is recognized that people like change when it is optional, inexpensive, or just plain fun. And certainly style itself—as a reflection of a cultural outlook—does inherently change, and technology makes it possible for the

Industrial Design (February, 1958), © 1958 by Whitney Publications, Inc.

look of things to change in both substantial and superficial ways.

But why have we been going in so heavily for superficial restyling of hard goods like appliances and automobiles? For one thing, styling trends, assumed to operate on a short-term basis, are relatively easy to measure and predict; therefore they are considered safe to rely on without any heavy commitments. Genuine innovation, even in appearance, is less measurable because it is difficult to determine whether people will accept or reject it until their decision is made in a real situation. Furthermore, innovation is thought—often mistakenly—to be a good deal more expensive kind of gamble.

So short-term style change is the usual road to newness. But the stylist cannot depart too radically from the over-all characteristics of the product. If the calendar of change is speeded up, he begins to run short of acceptable variations. Then, little by little, he is pushed into creating ridiculous changes. When consumers recognize this, styling ceases to motivate them to buy.

It is true that new looks and forms can validly be generated by functions that are new. But this approach never really works unless there is a genuinely new technology behind it. When the designer attempts to instill a sense of newness into something which is in fact no different, the consumer is seldom taken in for long.

This leads to the central question for the manufacturer: *What is the optimum point, between a natural cycle of change and styled obsolescence, for changing my product?*

Actually, different types of prod-

ucts demand different patterns of change. The telephone, for example, shows a very gradual change, with appearance directly geared to—and in fact, always paced by—technological change. New models are spaced 20 years apart. One reason this works is that the telephone equipment is paid for by the company, not by the consumer. It is only a symbol of the service that the customer is actually buying.

We see the same conservatism about change in products that represent a large investment to their owners—e.g., producer goods, where change must pay its own way. However, the closer you get to areas where goods are discretionary rather than essential, the more emphasis there is on new looks and the harder it gets to distinguish meaningful from superficial change. In pots and pans and kitchen tools there is a brisk trade in semiannual new looks. Several factors justify this practice: (1) Rarely do these looks interfere with the working of the product; (2) since tooling is often minimal in this industry, there are no economic forces legislating against a change if it can be made; (3) materials themselves often make the difference in appearance as they improve function (as with copper-bottom pans or enameled steel pans), and new materials and techniques literally produce new looks; and (4) no one expects one new style to obsolete all that has gone before. The housewares industry offers a vast range of quality and choice in nearly all products, so that the cost of achieving a more fashionable product is borne only by the customer who wants it.

The major appliances that compose a kitchen have enjoyed a more gradual evolution of form. In recent years these products have begun to take on a more integrated appearance. There has long been yearly publicity about "new" models, but the changes were so minor in character and so gradual that the old and the new could live side by side for the useful life of any single product. And changes in exterior appearance were, in the main, coupled with genuine improvements in functioning.

But even the smooth pattern of this industry is subject to the upset of radical innovation. Occasionally a new product (the wall oven, for instance) has been produced by a firm so convinced of an idea that it was willing to risk a broad step ahead. And almost without exception, these companies have had the field literally to themselves before the competition managed to catch up. The standard argument of many companies has been that "pioneering is for those who like risks; if and when consumer demand is proven, or created, we'll follow the trail, too." Sound as this policy may appear, the facts of marketing today negate it: the two-year lapse before potential sales can be accurately calculated and the three-year lapse before an appliance can reach the public add up to five years of unrestricted mar-

ket for the pioneer. If the innovation has any merit at all, five years of free market is like being handed the key to the candy shop. Who can afford *not* to take that kind of risk?

As a matter of fact, this realization is causing some significant upheavals in the appliance industry today. A number of manufacturers are flying in the face of pressure for the annual model change. They are trying a new approach: They will design and engineer a line of appliances to be sold over a period of several years, and make model changes only when genuine innovation warrants it. They will not, of course, leave innovation to chance; after each introduction of a new model they will devote their full creative energies to designing really new products to fit projected needs. This could add up to a successful way to introduce and merchandise all "considered-purchase" products.

Dr. Jacob Bronowski once said thoughtfully that both food and dope stimulate the mind and body, but in the long run only one provides the nourishment to keep a person alive. Because our economic system as well as our digestive system needs nourishment, this seems like a good question for manufacturers—in their own self-interest—to ask themselves: *Is this change food for the system, or is it a drug?* ♦

THE GROWTH OF PENSION AND PROFIT-SHARING PLANS is hitting a faster pace, according to Treasury Department figures. During 1957, 3,347 pension plans qualified, an increase of 364 over the 2,983 that qualified the year before. The number of profit-sharing plans approved during 1957 came to 2,714, a sharp jump of 769 over 1956.

—*Letter on Employee Benefits* 2/58

Business in '57: Profits Fade in the Stretch

THE IMPACT of the current recession on corporate profits is clearly shown by income figures recently tabulated by the First National City Bank of New York. Although total net income for 3,521 corporations in 1957 was 1 per cent higher than in 1956, figures for the fourth quarter available from 970 companies show that combined net income was 14 per cent below that of the 1956 fourth quarter.

The 3,521 companies, representing all major lines of business, registered a collective 1957 net income after taxes of \$19.6 billion. Sales or revenues of all reporting companies—excluding the financial groups—aggregated approximately \$290 billion, with the average net profit margin coming to 6.1 cents per dollar of sales. This was slightly below the 6.3 per cent margin achieved in 1956. Of the 60 nonfinancial industry subgroups, 45 had a narrower average net profit margin than in 1956, 9 had a wider margin, and 6 had unchanged margins.

Book net assets or net worth of all the reporting companies aggregated \$185 billion at the beginning of 1957, against which the year's net income represented an average return of 10.6 per cent. This was moderately below the 11.3 per cent average return in 1956 on book net assets of \$171 billion. Among the major industry subgroups, average return last year was lower in 50, higher in 13, and unchanged in 2. The companies included in the tabulation represent over 50 per cent of the book net assets of all U. S. corporations.

—First National City Bank Monthly Letter 4/58



"Miss Williams, get me those books on positive thinking."

—The New York Times

SLIMMING DOWN

YOUR REPORT SYSTEM

OVERLOADED DESKS and bulging briefcases unhappily attest to the fact that most companies have failed to solve the problem of too many executive reports. Yet the management that is willing to put a competent man to work on the job of really overhauling the report system may end up with a considerably lighter burden of reports on its collective desk.

How should the analyst approach the problem? The first step is to compile a complete inventory of all reports being sent to top management from all sources. In addition to collecting a sample of each report, the analyst should obtain accurate data on the frequency of submission, distribution, preparation cost, etc.

When the inventory is completed, the analyst should tackle the boiling down process, which involves:

1. Eliminating unnecessary duplication.
2. Utilizing reporting by exception whenever possible.
3. Adjusting frequency of reporting on the basis of need.
4. Summarizing detailed information.

The analyst will end up with a large number of reports that can be

By Robert W. McGahey
Condensed from The Office

eliminated without harming company operations. He will usually have no trouble in getting top management's agreement to about three fourths of the eliminations: reports that obviously are duplicatory or contain too much detail for busy top executives to digest. But recommendations on the remaining material may stir up some resistance on the part of those who have a vested interest in the reports. For example, an executive will hardly relish seeing the elimination of his pet reports designed to convince the president that he's doing a great job and is ready for bigger things.

The analyst should next design improved formats for the surviving reports. Ease of preparation and ease of reading are the two big targets, and uniformity is also important.

After designing improved formats, the analyst should complete his study by pinpointing any weaknesses in company operations that have been uncovered during the course of his analysis. Many times reporting problems, particularly at higher levels,

The Office (April, 1958), © 1958 by Office Publications Co.

are symptoms of deeper ills within the company. For example, reports which overlap each other in subject material may indicate that the groups preparing them are duplicating functions. Reports to the president containing a wealth of detail may indicate that the top man could well afford to delegate a little more responsibility in that particular area. The highlighting of such problems by the reports analyst is an important side-benefit of an analysis in depth.

Assuming that the analyst's recommendations are generally acceptable, the top executive will usually call for the installation of the proposed system on a test basis in order to evaluate all its details more completely. If any minor bugs develop, they can be straightened out during this trial period. When the president is completely satisfied with the new reporting system, it can be continued on a permanent basis.

It is important to remember that an effective report analysis should determine the usefulness of any report at the highest level that it reaches. At lower levels the analyst will run into comments like, "The wheels require this report and that's

that." In many cases the "wheels" don't need the report, but no one has ever taken the time and trouble to convince them of that or to provide them with a better alternative.

A comprehensive report analysis is a particularly important prerequisite when a company is considering electronic data processing. A comparative analysis of manual vs. computer costs should not be based on the existing report system. Refine and improve the report system first; then compare alternative costs.

The reason is clear if one considers the limited capacity of computers. The IBM 650, for example, has a capacity of 25,000,000 digits. Standing alone, that is an impressive figure. But a pair of four-drawer filing cabinets filled with typical reports also holds about 25,000,000 digits. And a large company has hundreds of filing cabinets holding billions of digits.

Such a comparison dwarfs a figure of 25,000,000 digits and spotlights the high cost of the computer. It emphasizes the importance of cutting out all the fat in existing reporting systems before considering costly electronic equipment. ♦

THE NUMBER OF STUDENTS enrolled in American colleges and professional schools in the fall of 1957 reached 3 million for the first time, according to the results of the current population survey conducted by the Bureau of the Census. Of the estimated 3,138,000 persons who were enrolled in schools of higher education, 2,054,000—or two out of three—were pursuing their education in public colleges and universities, one out of seven (438,000) were in private denominational schools, and one out of five (646,000) were in other private educational institutions. Of the total number, 2,350,000 were full-time students and 788,000 were taking classes on a part-time basis.

—*Current Population Reports, Series P-20, No. 80*



We're Wasting Scientific Manpower

By Irving Hirsch, William Milwitt,
and William J. Oakes, Jr.

Condensed from *Harvard Business Review*

ONE of the basic ingredients of this country's superlative industrial performance has been its ability to attain maximum production through the efficient use of manpower. Yet there is disturbing evidence that despite the current shortage of scientific personnel companies are not doing as much as they could to fully utilize the scientists they already employ.

Some of this evidence has been revealed in a recent survey of 148 professional members of aeronautical and electronic scientists in the southern California area. The respondents were employed by 50 aviation and electronic companies, educational institutions, and consulting firms.

Judging from the survey, only about a third of the average scientist's time is spent on problems that require his special training and experience. Moreover, scientists often perform assigned work that turns out to have negligible value because of poor planning on the part of management or supervision. And, according to the survey, scientists frequently spend time on unassigned activities, personal projects, unnecessary reading, and excessive coffee breaks.

Cases occur where, rather than follow an assigned course, some scientists follow different lines of pursuit because they disagree with the assigned procedure.

One particularly important problem revealed by the study is needless duplication of effort. A substantial 44 per cent of the respondents said their activities have been duplicated

Harvard Business Review (March-April, 1958) © 1957 by the President and Fellows of Harvard College.

at some time in their own companies, and 47 per cent have found their activities duplicated elsewhere. To this must be added the similar or identical work that is done without either party knowing it.

Among the factors that cause such duplication are: (1) government security regulations, (2) competitive restrictions between companies, (3) organizational weaknesses, (4) difficulties of gathering information, (5) communication difficulties, and (6) restrictions by foreign governments.

Turnover is another disturbing problem spotlighted by the survey. According to the survey results, the average scientist changes jobs once every 3.3 years, which means about a 30 per cent yearly turnover for an average laboratory.

Turnover is obviously expensive and wasteful, primarily because no matter how skilled and proficient a scientist may be, he must spend some time getting to know the operating system of the new company, its physical layout, and his new associates.

One way to lower this damaging turnover rate to increase the productivity of scientists is to improve working conditions. The survey shows that some of the more important problems in this area are:

1. Inadequate long-term planning and provision for flexibility in space usage.
2. Excessive crowding and inadequate separations for creative workers who must be able to concentrate.
3. Inadequate ventilation and temperature control.
4. Excessive noise that disturbs creative thinking.
5. Inadequate equipment.

6. Inadequate facilities to maintain equipment.

7. Lack of enough computing devices and mechanized and automated equipment to perform routine operations.

According to the survey, meetings, conferences, and informal discussions consume the largest percentage of the scientist's time. This indicates a definite need for improvement of communicating techniques. Too many meetings are haphazard: items of importance to only a few attendees are discussed, no one is prepared to discuss the main subject intelligently, or important items are discussed in the absence of key people who are concerned.

Such time-wasting meetings can be avoided by the preparation and distribution of a detailed agenda ahead of time. This makes it easier to decide who should attend the meeting and enables each individual to bone up on the subjects to be discussed.

Reports are another big problem area, judging from the survey. One of the serious objections that scientists have to report-writing is that they have to provide the same information in a number of different reports. One method of relieving the scientist of this task is to have him put the required information in a single "rough" report. A technical report writer could then use this source document for writing all the needed reports.

Another serious drain on the scientist's time, the survey makes clear, is the task of getting needed technical information. Judging from the experience of the respondents,

about 7 per cent of the average scientist's time is spent searching the literature for data, and much of this time is expended because of the difficulty of locating material.

Perhaps this time could be cut down by the use of automation in consulting literature. One approach would be to have large information-processing centers equipped with electronic computers. Industrial subscribers could reach these facilities via

radio and telephone when they need technical data.

In tackling the problem of scientific productivity, management must get out of the rut worn by the constant refrain of "more money" and "more manpower." Budget limitations and the scientific manpower shortage make it imperative that industry achieve more efficient utilization of scientists already employed in order to increase scientific output, commercial and military. ♦

Older Salesmen Get Back in Harness

IN THE FACE of a continuing shortage of skilled salesmen in the preferred age brackets, a number of companies have begun to hire older salesmen in recent months.

Gulton Industries, Inc., an electronics producer located in Metuchen, N. J., recently announced a program to employ 100 retired salesmen on a commission basis to sell its new product—a burglar alarm—to retail stores, plants, and homeowners. Dr. Leslie K. Gulton, president of the company, says: "We decided to seek successful salesmen, 65 years or more, who can render useful service without the pressure of making their mark in the highly competitive markets. We hope to give many men who have had idleness forced upon them the chance to keep active."

Another company has achieved highly successful results with what it calls senior salesmen—men past 60. The New York Wire Cloth Co. (\$8 million sales), York, Penna., hired scores of older salesmen for a specific task: a six-month program of missionary sales work to introduce a new window screen to retail hardware and lumber dealers. The sales of the new product have climbed steadily since its introduction, and the company asserts that when its next new product is introduced, senior salesmen will again do the job. According to the company, the salesmen's many years of experience were helpful in determining sales policy for the new product. Adds a company vice president, "The caliber of men applying for the jobs certainly opened our eyes to the tremendous pool of top-notch manpower available for projects such as this."

Still another company uses older salesmen not merely for temporary programs but as an important part of its regular sales force. The Panther Co., Fort Worth, Texas, manufacturer of a roofing compound and other products, encourages applications from salesmen in their sixties. In fact, about 300 of the company's 2,800 salesmen are between 60 and 80 years old.

—Thomas Kenny in *Dun's Review and Modern Industry* 2/58

Management Takes to the Mails

INDUSTRY IS GOING IN FOR LETTER-WRITING in a big way these days, making more and more use of the management newsletter as an effective, inexpensive, and timely communication device with which to reach its employees. Here are some of the types most widely used:

1. *The executive-level newsletter.* This is a limited circulation, generally confidential type of letter, found principally in larger companies where top policy cannot be communicated by word of mouth.

2. *The supervisory newsletter.* This type is booming. Aware of the importance of supervisory attitudes, more companies are publishing newsletters designed to bring company and supervision more closely together.

3. *The employee newsletter.* This is another type getting wide use. Some typical situations in which it is used are: multiple-plant companies where in-the-lodge information from headquarters is considered safer to entrust to a newsletter than to an employee magazine; concerns where budget restrictions make a newsletter desirable; local plants of multiple-plant companies where local-level communication is needed.

4. *The president's letter.* Not a newsletter in the strict sense, this is usually a communiqué to employees' homes on timely, important themes.

5. *Special newsletters.* These are supplements to established letters. Customarily they deal with subjects of sufficient importance and urgency to warrant special communication, such as bargaining, strikes, economic conditions, etc.

6. *Daily bulletins.* This is another type of letter that is mushrooming. Daily bulletins are usually distributed to personnel by supervisors, posted on bulletin boards, or both.

—*The Score*

Can Salesmanship Be Taught?

MOST BUSINESS EXECUTIVES favor the teaching of salesmanship in college, according to Charles (Chuck) Lapp, professor of marketing at Washington University in St. Louis. Speaking before the American Marketing Association, Professor Lapp based his conclusions on a survey of 450 marketing executives and salesmen in the St. Louis area.

Replying to the question, "Do you think salesmanship should be taught as a college course in schools of business?" 87.5 per cent of the respondents answered yes, 12.5 per cent said no. Such training should be required, according to 41 per cent, but 59 per cent felt it should be elective.

Of all the groups questioned, the highest percentages in favor of teaching salesmanship in colleges occurred among advertising executives and sales managers. The highest percentages favoring making salesmanship a required course of study occurred among sales managers and managers and owners of retail stores.

Long-Range Financing: Some Do's and Don'ts

By Andrew N. Overby

Condensed from Industrial Development

DEMAND FOR CAPITAL has every prospect of increasing dramatically in the years ahead. Although the current business letdown may well mean a decline in corporate financing in 1958, increased defense expenditures, higher state and municipal spending, and a continued population growth will create renewed pressures for capital expansion in the future.

What are the advantages and drawbacks of the various methods of long-range financing available to a growing company today?

When it becomes necessary to raise long-term money through the sale of securities, a number of larger industrial companies are opposed to selling any security other than common stock. They prefer to have a strong, simple capitalization without any long-term debt. For some companies this may be desirable or the only capitalization possible.

But in many cases such capitalization does not necessarily serve the best interests of either the company or its stockholders. The proper use of debt financing can provide important advantages. It can be the cheapest method of financing. Since

the interest on debt is deductible for tax purposes while dividends on stock are not, the net cost of debt money is usually very much less than the net cost of common-stock money.

Moreover, the use of debt securities widens the source of funds for a company, since many institutions such as life insurance companies are restricted in the amount of stock they may purchase. Without the use of debt securities, these large institutional sources of funds cannot be fully tapped and the company's financing program is deprived of flexibility.

In addition, prudent use of debt permits management to raise external capital without either diluting the control (where this is a factor) or increasing the investment of the existing equity holders. Finally, through the leverage factor, debt money permits higher earnings on the common stock when the borrowed money is used profitably.

There can be distinct disadvantages to debt money, of course. It may reduce the ability to borrow in the future; in periods of declining earnings, the leverage factor could magnify the decline; and in real ad-

Industrial Development (March, 1958), © 1958 by Conway Publications, Inc.

versity, debt can lead to serious trouble for a firm.

A company should always borrow less than it can so that it will have additional borrowing capacity in reserve against the day when money is needed and borrowing is the only practical way to get it.

One of the more significant developments in modern corporate financing is the increased use of unsecured debentures rather than mortgage bonds, particularly in the industrial fields. The unsecured debenture can give the creditor adequate protection through a variety of restrictive provisions, such as a prohibition on prior liens on assets, limitation on additional funded debt, maintenance of minimum working capital levels, limitation on dividends, and restrictions on the sale and lease-back of major properties.

A sinking fund is also very common in debentures. The fact that this usually provides for annual retirement of a portion of the debt is of particular interest to institutional investors, who want a regular turnover of their investment funds in order to average out changes in interest rates. A sinking fund also provides market support over the years as the company buys in debentures to meet sinking fund requirements. The attractiveness of the sinking fund to buyers makes it an important factor in pricing the securities.

A variant of the straight debenture which has been popular in recent years in industrial financing is the convertible debenture, which permits the holder to convert into common stock of the company. Because it combines the protective advantages of

a debt security with the speculative appeal arising from the growth potential of the common stock into which it is convertible, it often attracts wider investor interest and can be sold at a better price than the straight debenture.

Moreover, since the conversion price is usually set somewhere above the market price of the common stock, the use of convertible debt—assuming the continued growth of the company's earnings—prevents the immediate dilution of earnings which common stock financing entails. It is equivalent to the sale of future common stock above the present market price.

The danger of convertible securities is that a drop in earnings or in the market price of the common stock will frustrate the early conversion of the debentures into stock and leave the company saddled with debt. A company should not sell convertible securities unless it is reasonably assured of a continued rise in both earnings and the market price of its stock. Even under these circumstances, the debt financing should not be so heavy that failure of the issue to convert would adversely affect the company's ability to finance in the future.

Preferred stock capitalization is more costly than debt, but it has the advantage of not risking bankruptcy in adversity. Modern preferred stocks have protective and restrictive provisions similar in many ways to those of debentures, and frequently have other provisions to aid their sale, such as sinking funds, purchase funds, or conversion or income participation features. They have partic-

ular appeal for those institutional investors whose dividend income is 85 per cent tax exempt.

Common stock financing has increased substantially in recent years. In the two and one-half years ended June 30, 1957, U.S. industrial corporations sold more common stock than in the five years 1950-1954 inclusive. Common stock financing has also increased proportionately to other forms of financing. During the years 1950-54, common stocks averaged 14 per cent of total securities offered to the public for cash, while in the two and one-half year period ended June 30, 1957, the average was 21 per cent.

These figures indicate that corporate managements have seen the wisdom of obtaining permanent capital when market conditions are favorable for equity financing even though debt securities involve less cost. The addition of equity capital improves their capital ratios and gives them the freedom to incur debt in the future if it should become necessary or desirable.

In considering financing methods, industrial companies would be wise to avoid an overly complicated capitalization with numerous layers of securities. There may be occasions

when complicated finance is necessary, but complex or bizarre financial mechanisms often arouse suspicion rather than confidence on the part of the banker and the investor on whom the company must rely for external financing of its growth.

The current popularity of lease arrangements and of sale and lease-back arrangements, for example, may lead to some misconceptions about the debt obligations involved. Under these arrangements companies make long-term commitments to lease properties or sell their properties to institutional investors and then lease them back under long-term agreements.

These arrangements may not show on the balance sheet as capitalized debt, but they are certainly comparable as obligations. There is an increasing awareness of this fact by institutional lenders, security analysts, and bankers. Such lease rentals for essential productive properties are little different than direct obligations to pay interest and amortization on debt, except that the borrower usually pays a higher rate than he would if he borrowed directly on his credit, since the quality of the lease rental is no better than the company's own credit. ♦

STRIKING EVIDENCE of how hard salesmen are working to maintain sales volume these days is provided by Michael Braude, president of Emkay, Inc. (Chicago), which leases 3,100 cars to corporate sales staffs in a score of industries from soft drinks to steel. Braude reports that the average mileage on his cars has risen month by month since last summer, from 2,006 miles a car in June to 2,432 in January. He attributes this 20 per cent rise to the recession, which has caused "salesmen to work harder, travel further, and put in more calls."

—*Investor's Reader* 2/19/58

Doorbell Pushers:

Still Ringing Up Sales

By Faye Henle
Condensed from Barron's



THE FIRMS that send their salesmen out to ring doorbells appear to be resisting today's business letdown more successfully than those that wait for customers to come to them.

According to the best estimates available, some 1.5 million door-to-door salesmen in this country do a total business of about \$4 billion annually. The National Association of Direct Selling Companies (which seeks to allay the fears of retail merchants, and thus to prevent passage of ordinances against peddling) insists that volume has grown only in proportion to the increase in retail sales generally. However, the total sales of half a dozen leading companies in the field scored an increase of 181 per cent during the past decade. They were up 7 per cent last year.

There are nearly 3,000 companies engaged in door-to-door selling, including a great many independent organizations that buy merchandise

from various manufacturers and send canvassers out to sell it. Nearly three-quarters of the business, however, is done by manufacturers that have their own sales crews. The largest of these is the Fuller Brush Co., which is followed closely by Avon Products, Inc., a cosmetics house. Others include Electrolux Corp. and Scott & Fetzer Co., both vacuum-cleaner makers; Stanley Home Products, household wares; Tilo Roofing, Inc., building materials; Jewel Tea Co., Inc., tea and coffee; and Real Silk Hosiery Mills, Inc., apparel.

Significantly, several of the concerns report that their biggest 1957 gains were scored in the fourth quarter, after the recession began to take hold. For example, in the first nine months Avon's sales were running 15 per cent ahead of the previous year, but in the final quarter the margin widened to 16 per cent. Scott & Fetzer earned \$410,194 in December and January, up from

Barron's (March 10, 1958), © 1958 by Barron's Publishing Company, Inc.

\$223,234 in the same months a year earlier.

Direct selling has distinct advantages, particularly in times of economic distress. For one thing, manufacturers are better able to gauge their market and avoid costly inventory pile-ups. Salesmen in the field send in their orders as received, and the home office thus has an accurate, day-to-day check on the volume of goods needed to fill the demand.

Moreover, volume can be built by the relatively simple process of recruiting and training more salesmen. The manufacturer need not risk huge sums on advertising campaigns which may or may not pay off. Nowhere is this advantage more aptly illustrated than in the beauty-aid business. Cosmetics firms which distribute through normal retail channels customarily spend up to 30 per cent of their sales dollar on lavish television productions and other promotion efforts. By contrast, Avon has become the second largest cosmetics house in the world, yet its advertising efforts fall into the category of incidental expense.

Again, the direct selling companies have a better chance to maintain profit margins in periods of intense price competition. As C. S. Fetzer, vice president of Scott & Fetzer Co., points out, there are no cheaper vacuum cleaners on the scene when one of his men is demonstrating a machine to a housewife.

Selling costs, however, do run high. Door-to-door salesmen demand commissions of 40 per cent and higher, crew chiefs and supervisors take another 7 per cent, and home offices constantly must whip up enthusiasm with premiums and con-

tests. Hence, the most successful direct-selling firms are those dealing in quality, high-margin merchandise.

Finally, firms engaged in direct selling frequently fare better in a recession because rising unemployment improves their chances of hiring more salesmen. Although door-to-door selling is well recognized as a personality- and character-building vocation, its financial rewards are somewhat meager. Consequently, in good times direct-selling companies must offer fabulous-sounding inducements to attract competent sales personnel, and turnover frequently runs as high as 300 per cent per year. On the other hand, when the nation is afflicted with a rising tide of unemployment, enough people are attracted by the glowing promises in their help-wanted ads to give sales a quick lift.

All this does not mean, however, that direct selling companies are recession-proof. Once expendable income dips sufficiently low, housewives develop a stolid resistance to the blandishments of the doorbell pushers, especially if they become annoyingly numerous. In past recessions, earnings of the direct-selling companies have dwindled. The declines, however, came later than for firms using normal retail channels, and they were less pronounced. For example, Fuller Brush profits dipped 18 per cent in 1949, but not at all in 1954.

Perhaps the best evidence of the bright outlook for the door-to-door business is the number of new companies planning to enter it. Revere Copper & Brass, Inc., is preparing a special line of pots and pans for di-

and
nearly
how-
; that
the lar-
n Co.,
Avon
house.
o. and
cucum-
Prod-
roofing,
el Tea
d Real
el.

the con-
t 1957
fourth
egan to
he first
re run-
the pre-
quarter
per cent.
,194 in
p from

rect distribution. Corning Glass is actively considering plans for door-to-door sale of a line of Pyrex dinnerware, and Remington electric shavers now are invading homes in search of customers.

The door-to-door salesman no longer puts his foot in the door (to-

day he is trained to step back one pace after ringing the bell), and high-pressure tactics in general are frowned upon. Nevertheless, in this year of economic doldrums, he is likely to ring enough doorbells to push the sales and earnings of his employers to new highs. ♦

Growing Market North of the Border

MORE AND MORE U.S. COMPANIES are finding Canada a lucrative market for their products, judging from a recent survey of 237 U.S. firms made by the National Industrial Conference Board. Fully 83 per cent of the firms—a total of 196—now sell in Canada. Moreover, of these companies 110 maintain separate subsidiaries in Canada to manufacture and sell their products.

Some survey participants plan to expand their Canadian production facilities and intensify their sales efforts there. And many of the respondents without a direct stake in Canada at present expressed the view that the only long-range solution to the problem of making more sales in Canada is the establishment of manufacturing facilities there.

Most companies with Canadian subsidiaries indicate that they are wholly owned but have a great deal of independence in conducting their business. Many of these firms emphasize that Canadian executives staff the operation. However, a certain amount of over-all control is usually exercised by the parent company.

A number of advantages are cited by companies with Canadian subsidiaries. Heading the list is the elimination of import duty payments, which means "better profits," "better competitive position," and "elimination of red tape." Many companies also said that their subsidiaries enable them to meet the Canadian demand for home-manufactured goods.

Not all companies in the survey felt it was necessary to have separate subsidiaries in order to exploit the Canadian market: 86 of the companies who sell in Canada do not maintain separate subsidiaries. In this group, 64 companies place ultimate responsibility for Canadian marketing activities with their domestic sales organization because in many cases their "potential sales in Canada do not justify a subsidiary there." In addition, a number of companies said, Canada is so near geographically that there is no need to maintain separate units there.

Forty-one of the responding companies report that they are not actively soliciting Canadian trade. Some of these companies are limited in size and feel they would overextend themselves by attempting to tap the Canadian market. However, some would like to sell their products across the border but have encountered specific difficulties or deterrents, notably tariff regulations.



The Big Pitch for New Industry

By Leo Anderson

Condensed from Industrial Marketing

AND INDUSTRIAL COMPANY seeking a new plant location these days may have a difficult time making a decision, but it won't be for lack of information. Such a company will be offered hundreds of "ideal" plant sites and will be deluged with complete data on everything from the best means of transporting goods to market to the number of playgrounds available for employees' children. The company may even be offered a spanking new plant without being asked to lay out a cent of its own capital.

All this is the result of a burgeoning new activity: industrial development promotion. Some 6,400 organizations ranging from local chambers of commerce to state agencies are now active in industrial development promotion. They include city, county and regional development groups (generally composed of businessmen volunteers who want to see their area grow), railroads, utilities, and a few universities.

It's almost impossible to estimate the total amount being spent on industrial development promotion. However, a fairly authoritative estimate of space advertising spending alone is \$40 million a year, and industrial development groups are spending at least that amount on collateral material, personal selling, and other activities and services.

To get a close look at just what the organizations engaged in industrial development promotion are doing, *Industrial Marketing* surveyed 48 such groups: 31 state agencies, seven railroads, four utilities, three city chambers of commerce, two county groups, and one area development group.

The survey showed emphatically how new industrial development promotion is—and how fast it is growing. Of the 46 respondents who answered a question on how long their programs have been in effect,

Industrial Marketing (March, 1958), © 1958 by Advertising Publications, Inc.

22 started their programs within the past ten years. And of these, 15 started within the last five years. Only eight have been doing such promotion for more than 20 years.

The reasons for starting industrial development promotion are many and varied, but they follow a general pattern. For the railroads, the need was to build up the areas along their lines and thus increase traffic. For the utilities, the need was to build up the economies of their service areas. Among the local and state agencies, the most frequently mentioned reasons for promotion were the need for: "diversified industry," "a balanced economy," "jobs for a growing population," and "a reduction in unemployment."

Several of the respondents reported that increasingly aggressive competition from other areas forced them to step up their own promotion in order to get their share of new industry.

By far the most important method of industrial development promotion is personal selling. Of 46 respondents who answered a question on types of promotion, 43 said they use some form of personal selling, and 35 of these said that personal selling is the single most important factor in obtaining new industry.

In selling the Henneberry Rotogravure Co. (Chicago) on opening a branch plant in Flora, Ill., for example, Robert S. Henderson, head of the Department of Community Development of Southern Illinois University, and Flora's Mayor Norman Bryden had a series of face-to-face meetings with the president of the large printing firm. They told

him that Flora would invest in the complete renovation of an abandoned plant and rent it at a low rate, and that Southern Illinois University would conduct a testing program to find the men for supervisory jobs, as well as helping to train all the workers needed.

Second to personal selling in popularity is the use of booklets and brochures for industrial development promotion. Forty-three of the respondents reported using these collateral pieces, ranging from simple folders pointing out the general desirability of an area to massive volumes giving detailed economic statistics.

Thirty-six of the 46 organizations reporting on types of promotion said they use space advertising, and some of these said advertising equals or exceeds personal selling in importance. The media most widely used for this advertising are newspapers and general business magazines, with some respondents using vertical business publications.

Industrial development promotional campaigns include such general themes as "a good place to live and work" and "a favorable industrial climate." Others push such advantages as ample water, power, and labor supplies, good transportation, favorable tax rates, and good market areas. Still others concentrate on promoting a specific site to a specific industry.

A comparatively new arm of industrial development is the trade show. The first National Industrial Development Exposition was held in New York last spring. It had 34 exhibits, representing a total of 70

organizations (some of the exhibits were sponsored cooperatively by several groups from a particular area).

Purpose of the show, according to Raymond Y. Bartlett, president of NIDE, is "to provide industry management and their technical staffs with an opportunity to view and discuss at first hand, in one place, the latest development facilities offered by various localities and organizations."

Apparently the trade show has gained swift acceptance as a means of industrial development promotion: 14 of the respondents to the survey reported they exhibited at NIDE or other shows.

How successful has industrial development promotion been? A typical answer comes from John S. Welch, manager of area development for the Pacific Gas & Electric Co.,

San Francisco: "Very difficult to judge. So many factors enter into the selection of a site or even an area. I doubt that anyone can say: 'We were solely responsible for bringing in X plants worth Y dollars.'"

However, enough of the respondents replied with specific plant construction and cost data to show that industrial development promotion has resulted in attracting hundreds of new plants costing billions of dollars and employing thousands of persons.

According to the respondents to the survey, the competition for new industry is getting tougher every day. However, practically all of the respondents were optimistic about the future of their particular program. They foresaw expanded and more effective promotional programs to meet their area's needs for new industry. ♦

Who Are the Unemployed?

LARGE THOUGH IT MAY SEEM by recent prosperity standards, today's joblessness is far from a nationwide, all-industry epidemic; its incidence is highly uneven. Much as in past recessions, unemployment is most heavy among younger men doing unskilled manual labor in hard goods factories in the bigger eastern and midwestern cities. The auto industry alone accounts for a significant share of total layoffs.

By contrast, a lot of other workers—notably office employees—are coming off rather lightly. In fact, employment in wholesale and retail trade and in service industries, including finance, insurance, and real estate, has recently run above year-ago levels. Women, who shoulder a large share of these industries' work loads, are occupying a relatively smaller place on the jobless rolls than men. Older, highly-skilled male workers are suffering significantly less unemployment than their younger colleagues. And regionally, the South and Southwest, with below-average shares of hard goods work, enjoy below-average unemployment.

—John A. Grimes in *The Wall Street Journal* 3/10/58

The basic change that many experts see in the American consumer's attitude toward spending may foreshadow serious problems for much of U.S. industry . . .

Has the Consumer Lost His Appetite?

Condensed from Business Week

MANY EXPERTS predict that the current recession will be as superficial and short-lived as those of 1948-49 and 1953-54. But others favor the belief that the business let-down is the result of fundamental changes in consumer demand that foreshadow major problems for U.S. industry over a long pull. According to this diagnosis, the U.S. may be moving from a decade of enthusiastic consumption of almost any kind of goods into a period of economic satiation, or at least of significant changes in demands for goods. For some industries, this difficult period may last until 1965.

From now until that year, the population will grow from about 172 million to 193 million. At first blush, it seems unlikely that this burgeoning populace can produce anything but more and more demand. But if the statistics are broken down a disturbing pattern emerges:

1. From now until about 1965, older children will increase in number faster than any other age group.
2. More families—each with more children, on the average—will be farther along in the life cycle.
3. The rate of new household

Business Week (February 1, 1958), © 1958 by McGraw-Hill Publishing Co., Inc.

formations can't be expected even to match the high rate that prevailed in the late 1940's and early 1950's until 1965 or after.

What this can mean is an important change in buying habits. Generally, the studies of how people spend their money agree that older families—with household heads 40 and over and with older children—spend less on capital consumer goods such as furniture, household equipment, and automobiles. *Life* magazine's Study of Consumer Expenditures, for example, shows that spending on home appliances declined sharply in 1956 among families with older children, compared with such spending by younger families. Per family, they put somewhat more of their cash into autos than younger households, but almost half of total auto sales were made to families with younger children.

The Agriculture Dept. says flatly its surveys show that "families tend to make more large household purchases early in the family life cycle."

If these patterns hold true, then it isn't difficult to understand why the durable goods industries have shown signs of weakening. As chil-

dren get older, they impose new demands on the family budget for more expensive clothes, education, and recreation; less is left for hard goods.

This does not necessarily mean an over-all decline in consumer spending, however. Some businesses—food, clothing, recreation—will, in fact, thrive on the new pattern of the population. In other fields, there will be a steady increase in total demand, but the steep rises of the past may be delayed at least until the older children now growing up begin to form their own families.

But some sociologists and economists maintain that in addition to a change in the population pattern there has been a basic change in the U.S. consumer's attitude toward spending. Perhaps, these experts say, people feel that consumption isn't so important any more.

The argument runs like this: For a long time, the consumer had to do without the material goods that made life easier. In the 1920's, the industrial revolution reached a stage in this country where industry could make those goods available. But the U.S. was unable to realize this high-consumption economy, first because of the Great Depression and then because of World War II.

It wasn't until after the war that redistribution of income became real in terms of goods. At that point, the consumer went on a buying spree, and many thought there would be an insatiable demand for ever more and better goods.

Now, for the first time in history, an industrial economy has reached a point where goods have declined in importance. The great bulk of the

population has been fed, clothed, housed, and equipped. And now this diffusion of material wealth is undermining the efforts to sell more goods.

From industry itself can be heard faint echoes of this thesis that the consumer is satiated.

In introducing a new refrigerator model this year, Judson S. Sayre, president of the Norge Division of Borg-Warner Corp., made the kind of comment that is growing more common in the durable goods trade. After blaming the appliance industry for building "monuments to futility," he added: "Customers are moving sideways to spend their money in other directions."

The auto industry is befuddled by the booming sales of foreign cars, whose designs change but slightly from year to year, at a time when sales of domestic cars are off.

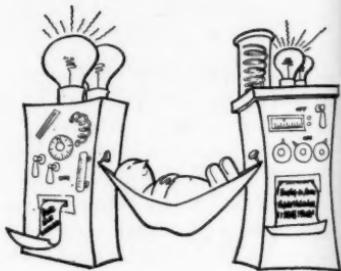
It is doubtful if industry leaders will agree now that the consumer has become disenchanted by gadgets. But some will admit that it takes more than added chrome and a huge advertising campaign to whet his appetite. They think it will take brand-new products, geared to the changing consumer market. One solution they see is serving special segments of the mass market now big enough for individual attention. Says one marketer: "Twenty-five years ago it was a problem of standardizing products to get a reasonable production cost. Now we have to fragmentize the market—not kid people in the mass that what advertising says everybody needs, they need. We've entered a period of the specialized mass market." ♦

even
ailed
950's

opportu-
Gen-
people
older
is 40
ren-
goods
equip-
mag-
pendi-
spend-
clined
s with
a such
s. Per-
ore of
younger
f total
es with

s flatly
es tend
ld pur-
cycle."
e, then
nd why
s have
As chil-
.

PUSHBUTTON DECISIONS: HOW FAR AHEAD?



By Kenneth Henry
Condensed from Dun's Review and Modern Industry

THE ELECTRONIC COMPUTER, management's new problem-solving wonder boy of less than a decade ago, has recently become something of a whipping boy. When the first digital computers designed for business applications made their debut back in 1948, many ordinarily cool-headed businessmen found it hard to resist the publicity, the pitch, and the promise. Exaggerated claims led some of the first users of computers to expect them to perform jobs they were never intended to do, or jobs that men or punched cards might do better. Expectations of the savings in cost, time, and labor were—and still are—often unrealistic. As a result, disappointment and cynicism developed in some quarters.

This is an understandable reaction for companies that expected too much and gained too little. But it would be just as serious a mistake to discount the future potential of electronics in business. Actually, the most practical applications of the computer in executive decision-making and control probably still lie ahead—as businessmen become more realistic

about what the "hardware" can and can't do, and as new technical refinements appear.

In most of the new applications of computers, manufacturers and users prefer to think and speak of the immediate payoff rather than later uses. But one large U.S. company is now at work on a vast experimental program that is exploring computer uses and potentials from top to bottom. For the past two years, computers have been testing 70 applications a day to pinpoint potential payoff areas, train personnel, get experience, and win acceptance. This research is more extensive, costly, and basic than all but the largest U.S. companies can afford, but it may lead to profitable new computer applications that will benefit many other companies.

Work being done by General Electric at Louisville and by Sylvania at its Data Processing Center in Camillus, N. Y., shows considerable promise for computers as operations research tools for management—with possibilities of broader applications in the future.

Dun's Review and Modern Industry (February, 1958), © 1958 by Dun & Bradstreet Publications Corporation.

According to George E. Kimball, science adviser for Arthur D. Little, Inc., "Simulation technique is rapidly becoming one of the best tools for management decision purposes. We have simulated not only the operation of oil refineries, but also a number of different manufacturing operations and the operation of a fleet of trucks." One of the latest uses was developed by an oil company to solve a refinery-location problem. Broadly, the question was twofold: to decide whether a refinery should be discontinued or enlarged, and whether it could profitably serve a given area over the long term. All the known and many of the estimated factors (such as normal growth and accelerated metropolitan growth) were considered and introduced into computer model "worlds," with the result that four statistically optimal alternative solutions emerged, out of more than 200 possible answers. Each of the four then had to be evaluated against such intangible factors as the effect of layoffs if the refinery were closed to increase capacity. Summing up the general experience with simulation technique, Kimball reports: "It has been possible to see how plants of different sizes and different layouts will perform under a wide range of operating conditions. And in a number of cases, it has been possible to spot difficulties which might not otherwise have been foreseen."

This technique has also been used in freight-scheduling decisions, where such factors as arrival time, maximum load, and engine power help to determine the right equipment to carry the largest load with the least waste to the destination.

Currently, GE and IBM are working together on the application of the simulation technique to job scheduling. Still in the laboratory stage, the developments have aroused considerable excitement. Various decisions, such as first-in, first-out or customer priority can be tested by simulating what actually happens in terms of idle human time and machine downtime as the job moves through the shop. Ultimately, this technique should be applicable to such tasks as helping foremen decide what priority to assign a job to get it through the shop at the lowest cost in the fastest time.

Nobody who is now using computers suggests that they will ever displace human thinking in decision making. But where decisions are based on data actually available in simple factual form, and where the answer depends on a selection of the alternatives based on complex and massive tables of data, the final decision may in some cases actually be machine-made. Some consultants call this computer use "table-searching." A simple instance might be the company that now bases industrial bids on an involved check of material, labor man-hours, licenses, patents, restrictions, transportation of raw materials, and various other quantitative factors. A West Coast aircraft manufacturer is actually now using a computer in determining which of several government contracts to bid on (on the hypothesis that all could be won). Warehousing and inventory problems are other examples of the kind of decision where factual data can be selected and analyzed to determine the right combination.

Not all decisions, of course, are reducible to selecting the best combination of accessible data. And quantitative solutions to problems completely skip human problems and a whole range of unpredictable—but possibly decisive—external events.

But there is little doubt that, as training tools and information-gatherers and analyzers, computers will be increasingly used to do effective work in making decisions and in learning more about the decision-making process itself.

The wisest attitude for business to take toward computers probably lies somewhere between the first wild hopes and the current counter-reaction of disappointment. As business

gains experience with computers, one by-product is becoming evident: the equipment forces companies to organize what they are doing and know the reasons why they are doing it.

So far, computers have proved most effective for companies that are already extremely well organized and managed, but they are helping less-organized managements to put their affairs in better order, even if these managements eventually reject the equipment as unsuited to their needs. In the very process of investigating the computer as a decision-making tool, executives are increasing their knowledge of the requirements of good management and are creating a business climate favorable to better management decisions. ♦

Block That Cliche!

AMONG SOME WRITERS these days, there is a great vogue for ribbing businessmen—and admen, particularly—for their excessive use of the cliché. But are businessmen as a class more addicted to the cliché than other occupational groups in the U.S.—actors, artists, Cabinet members, clergymen? We doubt it.

Nevertheless, all credit is due an executive in the personnel department of Minneapolis-Honeywell Regulator Co. named J. F. Chevalier, who decided to zero in on the problem. Some half dozen of his colleagues in the department joined in the effort. They began by drawing up a list of clichés known to be most frequently used by the group. They stopped the list, mercifully, at 88 phrases. Among them were such familiar friends as *bring it to a boil*, *beef it up*, *reviewing the bidding*, *flying by the seat of the pants*, and *lowering the boom*. It was agreed that for each blacklisted phrase uttered, the offender would pop a quarter into a penalty box.

Mr. Chevalier reports that the experiment has been a lot of fun and that there has been a noticeable improvement in the group's precision of thought and talk. And the confession is gamely made that in the course of a conference under the new rules the boom was lowered on Chevalier himself no fewer than four times.

—*Fortune* 2/58

one
the
gan-
now
.
oved
are
and
less-
their
these
the
needs.
ating
aking
their
nts of
ing a
better

**A financial gift isn't
the only way business
can aid education . . .**

TWELVE WAYS TO HELP LOCAL SCHOOLS

**The National Citizens Council
for Better Schools**

MANY FARSIGHTED COMPANIES these days are realizing that it is in their own interest to participate actively in helping to solve the serious problems besetting our educational system. For one thing, there is now a foreseeable shortage not only of specialists and technicians in all fields, but also of management personnel. The complexity of modern business means that tomorrow's executives must have a far wider grounding in general education than their predecessors had. The executive job today requires a broader view, the ability to work and communicate

with varied groups, a talent for synthesis as well as analysis, and a familiarity with psychology and philosophy. Only good education can supply these things, and today's educators need help from business to do the job.

Business has another important stake in education. According to spot surveys, a disturbingly large number of students and teachers have an outdated concept of what business is and how it is conducted. By making it possible for them to see business in action and learn the facts about current business operations and policies, companies can help to correct harmful misconceptions.

What are the specific ways in which business can cooperate with schools? In a recent survey of 265 companies and 305 school administrators made by the National Citizens Council for Better Schools, these 12 activities ranked high among those mentioned:

1. *Making trained personnel available for career guidance forums.* Many larger companies maintain a pool of people available for participation in school panel discussions. Volunteers from business often conduct mock interviews with high school seniors to prepare them for actual job interviews later.

2. *Cooperating with schools in the preparation of special exhibits.* Many companies provide equipment or displays relating to their industries. Industry backing has been largely responsible for the increasing number of student science fairs throughout the country.

3. *Employing students under a*

*"How Do Business and Schools Work Together?" © 1958 by National
Citizens Council for Better Schools.*

cooperative education plan. Under such plans, teen-age students in vocational trade schools and commercial high schools work part-time for standard wages in jobs directly related to their studies. To keep the jobs, they must maintain passing grades in required academic studies. Trainees are used in banks, offices, public institutions, retail establishments, and light and heavy industry. Student work experience programs provide a way for students to make a gradual adjustment from full-time studies to full-time work, and also help combat drop-outs by giving students a chance to earn money while staying in school. In addition, these programs give students practical experience and proficiency in the vocations of their choice, help them develop good work habits and assume responsibility, and help them gain insight into the operation of our economy.

4. Employing teachers during summer months. A summer job in the field of his major interest can greatly benefit a teacher's effectiveness. If he teaches bookkeeping, for example, and gets an assignment with a bank or accounting department, he can pick up the latest methods firsthand to pass along to his students.

5. Having an open house for school visitors. On one special day set aside for the occasion, a large variety of local businesses can open their doors to school visitors. Careful programming is the key to success here.

6. Preparing films for school use. Well-produced films or film-strips on science, manufacturing processes, or careers are constantly in demand by

schools. In addition to those produced by national companies, school administrators would like to see films produced on local industries and job opportunities. Films with excessive sales pitches for a single company are not wanted; just a simple credit line is preferred. Businessmen interested in film production can get general information from publications of the National Audio-Visual Association.

7. Putting special research services at the disposal of school personnel. For example, a company with an extensive reference library in science can put it at the disposal of teachers in the region. Some companies make staff personnel available for answering special technical questions. It can also be helpful to put teachers on mailing lists to receive technical information bulletins or trade association newsletters, and to give teachers subscriptions to useful trade or technical journals.

8. Hiring personnel from schools for special research projects. Giving teachers typical "in-plant" problems to solve as research exercises in economics or science can be of value both to the teacher and to the company.

9. Maintaining a speakers' bureau of specialists to give supplementary lectures. This bureau, coordinated by an agency such as the local Chamber of Commerce, should include available speakers from all types of business. A teacher desiring a speaker to explain how supermarkets operate would simply get in touch with the bureau.

10. Sponsoring workshops or conferences attended by both business-

men and educators. Large-scale conferences for industry and education are on the increase. At their best they stimulate individuals to go home and work on behalf of local schools.

11. *Giving employees time off to participate in community-school affairs.* Time off to work on a special school survey, to promote an upcoming bond issue, to attend an emergency school board meeting, or to take part in other school-connected activities is being given by an increasing number of companies today.

12. *Contributing equipment or demonstration materials to schools.* Materials that illustrate the practical application of science and math to everyday life are particularly valuable. For elementary grades, demonstration materials showing basic science concepts in simple fashion are in constant demand. Schools in highly industrialized areas find gifts of usable equipment—not "museum pieces"—most valuable. Cutaway models, showing inner workings of machines, are also welcomed. ♦

Nine Ways to Break into Print

MOST PRESS RELEASES that land on an editor's desk will never see the light of day. The reason is simple, according to N. N. Goodman, Jr., editorial director of the Industrial Publishing Corp.—no magazine has enough space to run all the items it gets, even when they contain valid news. To increase the chances of getting your release in print, Mr. Goodman suggests that you ask yourself these questions:

1. *Is it really news?* A release about an insignificant item of no perceptible interest won't get past an editor—and he'll be more skeptical about the validity of your next release.
2. *Is it appropriate for the magazine?* Address only magazines that are interested in your topic, and be sure to point out how the subject relates to the specific magazine's field.
3. *Does it stand on its own hind legs?* Implying that there might be some advertising in the offering is an insult to the editor and puts the kiss of death on your material.
4. *Is the copy explicit?* Get the what, who, why, and where in the first paragraph, but remember you're addressing specialists, and give all the pertinent facts in subsequent paragraphs.
5. *Is it puffed up?* The windier it is, the less chance it has.
6. *Is it interesting?* Just because it's technical, it doesn't have to be dull.
7. *Is it illustrated?* A good photo gives your release an edge before it's even read. Be sure to identify all photographs.
8. *Is it properly prepared?* Double-space your copy, leave adequate margins on both sides, and staple all pages together firmly.
9. *Is the source identified?* If the editor wants more data, have you indicated whom he should contact?

—Advertising Requirements 2/58

U.S. Productivity Inches Ahead

UNIONS basing their 1958 wage demands on the increase in national productivity won't find much to cheer about in a statement on productivity made recently by the Commissioner of Labor Statistics, Ewan Clague, before the Joint Economic Committee. According to Clague, productivity gains in 1956 and 1957 have not kept up with the average compiled in the previous nine years.

During the period from 1947 through 1955, output per manhour in the private economy increased at an average rate of 3.4 or 3.9 per cent a year, depending on whether Bureau of Labor Statistics or Census data are used, Clague said. (BLS estimates are based on hours paid for, Census estimates on hours worked.) For nonagricultural industries, the average gain was 2.8 or 3.3 per cent a year.

However, output per manhour for the whole economy went up only about 1 per cent in 1956 and 2 per cent in 1957, according to Clague. For manufacturing industries, he put the increase at only .3 per cent for 1956 and .8 per cent for 1957. But this poor showing in the past two years does not indicate a long-term slowdown in the rate of productivity growth, Clague emphasized, pointing out that there have been recent heavy expenditures in new plant and equipment.

—*Labor Policy and Practice* 2/6/58



"Every morning you go off to work—every night you come home. I don't know, it's so sort of depressing somehow."

—Reprinted by special permission of *The Saturday Evening Post*.
Copyright 1958 by the Curtis Publishing Co.

Despite the recession gripping much of the economy, the amazing growth of the life insurance industry shows no signs of slowing down . . .

Life Insurance Strikes It Rich

By Sandford Brown

Condensed from *Newsweek*

ONE OF THE MOST remarkable booms in recent history has been the whopping growth of the U.S. life-insurance business over the past seven years. In that period, the total of U.S. life insurance in force has doubled, to a towering \$456 billion. And now, having completed their best year in history (\$65.4 billion in sales), insurance men are confidently expecting another record rise in 1958.

What's behind the boom? Why are life-insurance sales climbing so fast even in the face of the recession gripping much of the U.S. economy?

Part of the answer lies in some fundamental trends working for the insurance industry. "More and more people are beginning to realize that they need insurance," says Vice President Robert Slater of the John Hancock Mutual Life Insurance Co., "and that you can't accumulate money under our high tax structure." Then, too, there have been improvements in the industry's "products" (i.e., policies). But the answer has another part: sheer salesmanship. For all its advantages, life insurance, as one agent puts it, "is never bought—it has to be sold. Even though a prospect may want it, the salesman always has the job of making him want it now."

Every year, life companies spend millions to recruit new agents, setting up a barricade of psychological tests to shunt off the timid, the over-aggressive, and the hostile applicant. They spend added millions on training courses, drilling initiates on telephone techniques, criticizing selling approach in "role playing" sessions, and supplying every man with enough canned sales talks to tide him over until he starts cooking up his own ideas.

The result of all this has been a steady rise in the ability and prestige of the average life-insurance salesman. He once ranked as a pushy, vaguely disreputable bore; consumer surveys show that he now has a prestige status close to that of doctors and lawyers.

Another reason for the sharp growth of life insurance, insurance men say, is that U.S. citizens were grossly underinsured ten years ago, when coverage amounted to less than half of today's \$8,600 per family. "Most of our growth now is an effort to catch up," says New York Life's executive vice president, Dudley Dowell. The expansion of social security and National Service Life Insurance has made millions of people conscious of insurance and retirement-planning problems; rather

Newsweek (March 10, 1958), © 1958 by Weekly Publications.

than competing with private life insurance, they have greatly smoothed the agent's selling path. Rising incomes and the urge to "buy up" (i.e., buy more expensive policies) have also buoyed business.

Life companies themselves have stimulated business by stirring up their product "mix." "It's the variety of programs offered by insurance companies that accounts for a good deal of the sales," says H. Dixon Trueblood of the Occidental Life Insurance Co. of California.

Among the new variations are:

1. Major medical plans, providing additional coverage against "catastrophic" accidents or illnesses that Blue Cross and other health plans can't handle. These have been brought out on a large scale by life companies in the past two years and have added billions in new business.

2. "Family plans" combining a whole-life policy for the father with term insurance for mother and children. A rarity two years ago, such plans now account for 20 per cent of new ordinary underwriting.

Group insurance, which never really got off the ground until World War II, accounts for a quarter of new sales; in an era of fringe benefits, life companies are pressed by clients for a huge variety of programs. "Right now, we're using policies to make it easier to recruit the middle-echelon executives, and designing new ones every day," says Metropolitan vice president Edwin C. McDonald. "There's a terrific demand here." The Met's biggest group policies: an \$11 billion policy on federal employees and a \$3.8 billion policy for the Bell System (Met ad-

ministers these but actually underwrites only 20 per cent, the rest being spread among dozens of other firms).

In contrast to nearly all competing products, insurance has the advantage of becoming cheaper year by year; costs have dropped from an average of \$29 per \$1,000 of coverage to \$21 in ten years. Automation equipment to handle its huge paperwork load has helped the industry cut operating costs, and so has the increase in the size of the average ordinary policy (up from \$2,600 to \$5,400 in ten years). Some life firms now offer "quantity discounts" on policies over a certain size, which is helpful in selling company clients who want to carry hefty insurance on their key executives.

Other big reasons for lower costs are more purchases by young (and healthy) prospects, and tremendous advances in medicine, which have lengthened the average life span about four years since 1947. Sufferers from tuberculosis, diabetes, cancer, and heart disease, generally uninsurable five years ago, can now get some kind of coverage. Even the number of "hazardous" occupations is dwindling with advances in safety engineering. For example, building wreckers, oil-field blasters, and explosives workers—extra-premium risks ten years ago—generally get standard rates today.

But even as sales have soared, the men at the other end of the insurance business—in the investment department—have found themselves hard-put for cash. The heavy stocks of government securities which life companies bought to help finance World

der-
rest
ther
etting
age
year;
verage
\$21
ment
load
ating
n the
policy
n ten
offer
s over
ful in
ant to
ir key
costs
(and
endous
n have
about
ufferers
cancer,
ninsur-
et some
number
s dwin-
y engi-
building
d explo-
n risks
standard
ared, the
nsurance
- depart-
es hard-
stocks of
life com-
ce World

War II—and which provided a steady flow of cash as they were gradually sold off during the postwar years—are now down to rock bottom, averaging about 7 per cent of total assets in most portfolios. What's more, the rush of new business in itself has put a crimp in company cash. A new policy always costs a company more than it brings in, because of hefty commissions and other costs.

To make current high interest rates pay off, life companies are making commitments to furnish funds months and years ahead. The great bulk of the funds goes into corporate financing or into real estate mortgages, where neither a slowdown in capital expansion nor the leveling-off in housing has left insurance men short of prospective borrowers. Metropolitan, for example, has sunk \$200 million to help finance the airlines, mainly for purchases of jet airliners. Prudential handles the entire corporate debt of such giants as International Business Machines (\$500 million) and Chrysler Corp. (\$250 million); it has mortgages on 557,000 pieces of U.S. and Canadian real estate, ranging from the land under the Empire State Building to Florida orange groves.

Competition will also help lower costs—and there is no shortage of this in the life-insurance business. While about three-quarters of the business is done by some two dozen top companies, small firms selling to local markets sprout up weekly (the total of "legal reserve" U.S. life companies has jumped from 1,100 to 1,300 in two years). "It's the agent who makes it possible for small companies to compete," explains Milton Goldberg, a research director of the giant Equitable Life Assurance Society (\$8.9 billion assets). "If a client has confidence in an agent, then the client will buy."

For all the competition, however, there is probably plenty of business to go around. Edmund Zalinski, executive vice president of the Life Insurance Co. of North America, puts the total insurance needs of the U.S. and Canada at \$3 trillion—although all the insurance coverage and social-security and welfare plans in effect cover barely a trillion. On top of that, says Zalinski, "human life values are increasing at the rate of \$200 billion per year by reason of population growth and inflationary pressure; \$200 billion of new insurance must be sold each year just to keep pace."♦

AN OPEN-DOOR POLICY for engineers over 45 has paid off for one company (Stavid Engineering, Plainfield, N. J.). Last year this company, which develops and manufactures radio, radar, and electronic equipment, ran small newspaper ads indicating interest in hiring engineers over 45. Replies to this ad, plus word-of-mouth and other publicity, has supplied a steady stream of qualified older applicants—some over 65 years old. Stavid's policy of hiring older engineers, in force since 1945, has proved well worth while: company growth has never been hampered by engineer shortages or turnover problems, and younger engineers have profited from the experience of their older colleagues.

—*Industrial Relations News, Vol. VII, No. 33*

Appearances can mean everything—especially in the office . . .

HOW TO LOOK INDISPENSABLE

**By David Snell and
Charles Champlin**

*Condensed from
The New York Herald Tribune*

THIS IS NO TIME to be caught with your elbow draped on the water cooler or your heels planted on the desk. And yet the simple pleasures of office life must go on. Here are a few handy techniques that will enable you to give the impression that you're working and yet not get anything actually accomplished.

Economy. In this time of narrowing profit margins, make it clear that you have the best interests of your company at heart. On your desk, plainly visible, have a neat pile of pencil stubs whose length does not exceed 1½ inches. "Waste not, want

not" is your answer if comment arises. (Keep your full-length, working pencils out of sight.) From time to time, wander into other offices, turning off lights and clucking your tongue in disapproval. Beside your typewriter keep a sheet of carbon paper that has been beaten to shreds. At the right, conspicuous moment throw it away with an audible sigh of regret.

Corridor conduct. When en route to the washroom or the water cooler, or when arriving late or leaving early, move at a fast dogtrot. When your superiors see you, their subconscious tells them you are frightfully busy and engaged in matters of the utmost urgency. Smile wanly and run your hand jerkily through your hair, creating the impression that you have been asked to do far more than is possible for any one human being, but that you will somehow get it done.

The typewriter. There's nothing like a swiftly-clacking typewriter to make you look productive. You can use your typewriter for personal correspondence, a novel, short stories, light nature essays, anything. Simply be sure to do your writing on inter-office memo paper, stockroom requisition forms, invoices, or expense account sheets.

Reading. Personal reading on company time is, of course, foolhardy. But you can learn to make your personal reading actually *work for you*. Never read a newspaper, as such, at your desk. Instead, on your way to the office, tear your paper into clippings, story by story. You can then read the paper, clipping by clipping, at your desk. Circle an occasional

The New York Herald Tribune (March 21, 1958), © 1958 by New York Herald Tribune, Inc.

comment
, working
m time
offices,
ng your
le your
carbon
shredds.
moment
ble sigh

en route
r cooler,
ng early,
en your
conscious
lly busy
e utmost
run your
ir, creat-
ou have
than is
n being,
w get it

nothing
writer to
You can
personal cor-
rt stories,
g. Simply
on inter-
om requi-
xpense ac-

g on com-
foolhardy.
your per-
k for you.
as such, at
ur way to
into clip-
can then
y clipping,
occasional
ribune, Inc.

ENT REVIEW

paragraph in red and place these clippings in a separate pile (which can be discarded at the end of the day). Your industry will astound everyone.

The telephone. At modest cost, you can purchase one of those rubber gadgets that enable you to cradle the receiver on your shoulder. By fastening down the phone buttons with a piece of tape, you can keep your shoulder to the phone all day while you write letters or read. Bosses who catch sight of you will be deeply impressed, assuming that you are making every minute count, keeping up with your work while awaiting an important connection. This technique also enables you to wave away bosses who come by with potentially embarrassing questions like "What are you doing?" Best of all, the line remains free to receive incoming calls

concerning lunch dates or important gossip.

Conference technique. Idle talk costs jobs. However, there's no reason why you can't hold friendly personal conversations on company time, providing they are made to look like business conferences. All participants should be armed with clip boards and pencils. Handy phrases like "volume bases," "break-even point," and "catharsis" should be injected from time to time in a louder-than-usual voice. Laughter is permitted, but it should have a rising inflection and carry the implication that it is in response to a really brilliant suggestion for handling accounts receivable. To outsiders, it will be obvious that you are noodling around with The New Project, about which nothing more can be said at the present time. ♦

New Help for Harried Correspondents

SOME BUSINESS FIRMS are finding that they can substantially reduce their paperwork costs by making use of a new kind of typing service. Unlike conventional letter shops, which mass-produce form letters by a variety of methods, these services are geared to handle individual correspondence of all types—letters, memos, and reports—on a 24-hour basis. All material to be typed is dictated on recording equipment; the service will supply machines to customers who need them. Once a day they pick up the filled tapes, belts, or records, returning the typed letters within 24 hours.

While guaranteeing neatness and accuracy, typing services place most emphasis on the cash savings they can offer. A \$70-a-week secretary costs her company \$303 per month in base salary alone, excluding vacations and fringes, and much of her time is spent on things other than the typing for which she was basically hired. For the same \$303, a typing service can produce 80,000 words per month—or 533 letters of 150 words each.

—*The Iron Age* 2/20/58

BRIEF SUMMARIES

of other timely articles

GENERAL

HOW THE ECONOMY WILL LOOK IN 1975—IF PAST TRENDS CONTINUE. *Business Week* (330 West 42 Street, New York 36, N.Y.), March 8, 1958. 50 cents. Two disturbing aspects of today's economic picture—the slump in business and the fast rate of Soviet industrial growth—make it advisable to take a realistic look at America's growth prospects, according to this article. In reviewing trends and figures, it describes the contentions of two schools of thought as to where the U.S. economy is heading. Charts.

THE FACTS ABOUT OUR WATER SUPPLY. By Gilbert F. White. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), March-April, 1958. Reprints \$1.00. Since use of water will probably double by 1975, the author urges an attack on four important types of water waste: excessive "mining" of ground waters; pollution of water supplies by industrial waste; failure of city planning to make adequate provision for water; and commitments that establish a high demand at crucial periods of low water. After discussing some of the technological advances that will affect the water supply in the future, he advises businessmen to acquaint themselves with the current situation and plan for more efficient use of water, to support studies on water supply and needs, and to press for state and national regulations on water purity and water allocations.

MANAGING DEFENSEWORK FOR PROFIT. *Steel* (Penton Building, Cleveland 13, Ohio), April 14, 1958. Re-

prints gratis. There are now big opportunities for small and medium-size firms to climb on the defense bandwagon by providing a product or service tailored to the needs of the fast-growing missile industry. This article presents specific information on the various missile programs now under development and recommends procedures for entering this profitable defense industry.

THE COST-CUTTING URGE. By Edward T. Thompson. *Fortune* (9 Rockefeller Plaza, New York 20, N.Y.), March, 1958. \$1.25. With economies ranging from timed telephone calls and tourist-class flying for executives to inventory reduction and elimination of unnecessary paperwork, U.S. firms are embarked on intensified cost-cutting programs, reports the author. Analyzing the results of a survey on company cost-cutting, he discusses two major problems in this area: (1) union wage rates, which few firms are willing or able to cut; and (2) cost reduction in such departments as sales and research, where immediate savings actually result in greater losses in the long run.

INDUSTRY FIGHTS BACK ON STATE AND LOCAL TAXES. By Melvin J. Goldberg. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N.Y.), April, 1958. 75 cents. Instead of running away from excessive state and local taxation, the author reports, many companies are staying to fight it out. This article relates the experiences of companies that have actively campaigned for lower taxes—such

ceeding often enough to encourage other companies faced with the same problem—and points out that informed public opinion can be a powerful ally in industry's battle for equitable tax treatment.

SURVEY OF CURRENT BUSINESS—ANNUAL REVIEW NUMBER. (Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.), February, 1958. 30 cents. The decline in business during the last quarter of 1957 canceled part of the earlier 1956-57 gain, according to this Department of Commerce publication, but the year closed with the economy operating at a near-record level. Separate sections of this annual review analyze economic activity and adjustment in specific areas during the past year: national income and product; production, distribution, and prices; and foreign business and investment.

WHY NOT STUDY EXECUTIVES? By Chester L. Brisley. *Plant Administration* (481 University Avenue, Toronto, Ontario), March, 1958. \$3.00 per

year. An exact study of how executives spend their time every day can be a useful basis for appraising their work and guiding them toward improvement, maintains the author. In this article, he describes how his company (Wolverine Tube Division, Calumet & Hecla, Inc., Canada) used the work-sampling technique to make such a study and discovered several significant facts—e.g., its executives spent only about 10 per cent of their time working alone—that enabled it to take steps to increase executive efficiency.

CORRECTION

The April issue of **THE MANAGEMENT REVIEW** incorrectly stated that the 1958 Directory of Management Consultants and Business Services was available from *American Business* for 35 cents. Subscribers to *American Business* receive the Directory without charge; it is priced at \$5.00 if purchased separately. **THE REVIEW** regrets any inconvenience that may have been caused by this error.

INDUSTRIAL RELATIONS

BETTER BUSINESS RELATIONS THROUGH LETTERS TO EMPLOYEES. (Business Relations Department, Chamber of Commerce of the United States, Washington, D.C.) 50 cents. For as little as four cents per employee, companies can present the facts of their business operation to their workers in letters that have the advantage of being personal, indicating importance, being flexible and timely, and reaching the whole family, according to this guide to writing better employee letters. In addition to samples of letters mailed by major U.S. firms, the booklet contains advice on the content, style, and timing of employee letters.

PENSION AND PROFIT-SHARING PLANS. By Samuel L. Zeigen. (Research and Review Service, Inc., Indianapolis

9, Ind.) 75 cents. Anything as important to the economy as the development of pension and profit-sharing plans deserves the attention of every employer, says the author, and it is possible to understand the basic framework of the various types of plans without possessing all the specific details of each. In this 40-page pamphlet, he outlines methods of determining whether a pension or profit-sharing plan is desirable, discusses the factors that should determine the employer's choice of an appropriate plan, and describes the more popular methods of funding.

WORKERS JOIN THE WAR ON COMPETITION. By Robert Newcomb and Marg Sammon. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N.Y.), April, 1958. 75

big op-
ium-size
use bands
or service
and growing
presents
various
develop-
tures for
ense in-

Edward
ockefeller
, March,
s ranging
d tourist
inventory
unneces-
embarked
grams, re-
the results
utting, he
s in this
es, which
le to cut;
ch depart-
where im-
in greater

ON STATE
Melvin J.
d Modern
New York
cents. In-
the author
staying to
relates the
have ac-
taxes—suc-

cents. Maintaining that employees can be management's best allies in the battle to control costs and keep ahead of competition, the authors of this article hold that one of the best ways of obtaining the cooperation and assistance of workers is through the medium of employee publications. This article

describes how many companies are reaching their employees with the economic facts of life through company newspapers, magazines, annual reports, newsletters, and bulletin boards, as well as with such devices as displays of competitive products, special meetings, and plant tours.

OFFICE

HOW MUCH SHOULD YOU PAY OFFICE EMPLOYEES? *Modern Office Procedures* (812 Huron Road, Cleveland 15, Ohio), February, 1958. 50 cents. The nation's average clerical pay is now \$64—an increase of \$7 in four years—according to the results of the latest National Office Management Association survey, reported in this article. Breaking clerical salaries down in chart form according to job classifications and regional variations, it lists standard salaries across the country, indicating the increases made over the last three years.

CATALOGING THE ELECTRONIC COMPUTERS. By David B. Watson. *Office Equipment News* (146 Bates Road, Montreal 26, Quebec), March, 1958. \$4.00 per year. This two-page chart offers a chance to compare the basic characteristics of a variety of electronic data-processing machines ranging from a small bookkeeping machine to the biggest of the giant computers. Comparative data is given on typical monthly rental, number of machines installed to date, storage capacity, type of input, speed of input and output in characters per second, and so forth.

PRODUCTION

MATHEMATICS FOR PRODUCTION SCHEDULING. By Melvin Anshen, Charles C. Holt, Franco Modigliani, John F. Muth, and Herbert A. Simon. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), March-April, 1958. Reprints \$1.00. Reporting the results of research, the authors of this article describe the practical methods they have developed to set factory production levels and relate them to present and projected sales. Through the use of "decision rules," managers using the mathematical techniques outlined can eliminate guesswork in the scheduling of production and employment by selecting the most efficient combination of adjustments that should be made in the size of the work force, overtime work, finished goods inventory, and order backlog.

"BUILDING BLOCK" UNITS CAN BRING YOU AUTOMATION. By C. J. Vlahos. *Mill & Factory* (205 East 42 Street, New York 17, N.Y.), February, 1958. 60 cents. Even the small manufacturer can afford automation if he uses "building blocks"—standardized, flexible units which don't have to be scrapped with every model and can be bought at a low initial price, says the author. In recommending these units, he discusses the various kinds that are available and their functions in different areas of the manufacturing process, as well as the cost involved in their purchase and maintenance.

ANNUAL SAFETY EQUIPMENT ISSUE. *Safety News* (425 North Michigan Avenue, Chicago 11, Ill.), March, 1958. \$1.00. Although it is a small amount

anies are
the eco-
company
al reports,
ls, as well
displays of
meetings,

NIC COM-
on. Office
ates Road,
rch, 1958.
page chart
the basic
f electronic
ng from
ine to the
ters. Com-
cal monthly
es installed
e of input,
n characters

CAN BRING
J. Vlahos,
42 Street,
uary, 1958.
manufacturer
f he uses
dized, flexi-
have to be
and can be
ce, says the
these units,
nds that are
ns in dif-
manufacturing
involved in
ance.

ENT ISSUE
h Michigan
March, 1958.
small amount

ENT REVIEW

in proportion to the value of life and property protected, the outlay for safety equipment in any up-to-date plant is a sizable one, and this issue has been planned to help manufacturers get the greatest value from their investment. Included in the guides for purchasing, using, and maintaining safety equipment are sections on plant design and construction, housekeeping and maintenance, noise control, personal protection, materials handling, plant protection, and safety promotion and training.

HOW MAINTENANCE PLANNING PAYS OFF. By L. G. Mustill. *Plant Administration* (481 University Avenue,

Toronto, Ontario, Canada), February, 1958. \$3.00 per year. The efficiency of a plant's maintenance crew is largely determined by how well the work is planned, according to the author, and their base effectiveness can often be raised 60-100 per cent or more by detailed preplanning. In this article, he describes the organization and operation of maintenance planning in one company (Canadian Industries, Ltd., Montreal) whose program has resulted in such intangible benefits as methods improvements, the development of standard procedures, and improved inter-departmental relations, in addition to effecting substantial cost reductions.

MARKETING

TOWARD BETTER ADVERTISER-AGENCY RELATIONS. By Ira W. Rubel. *Harvard Business Review* (Soldiers Field, Boston 63, Mass.), March-April, 1958. Reprints \$1.00. Although much of the discussion of advertiser-agency problems has centered on the specific issue of agency compensation, this is only part of the broader question of how the advertiser and the agency can arrive at a better understanding and a more efficient relationship, says the author. In this article, he analyzes some of the dissatisfactions on both sides and offers a four-step solution to the problem of agency compensation which he believes will modify the commission system in such a way that a relationship of confidence and understanding will be established.

FITTING THE SALES FORECAST TO YOUR FIRM. By James B. Boulden. *Business Horizons* (School of Business, Indiana University, Bloomington, Ind.), Winter, 1958. \$2.00. While the sales forecast is a must for every successful business, its sources of information, processing techniques, and final interpretation must be carefully chosen with an eye to the needs of the individual

firm, the author maintains. Describing in detail both the mechanical and the discretionary techniques of forecasting, he analyzes the usefulness of each type and suggests that a good final forecast is often a combination of several types.

A GUIDE TO DIRECT MAIL. *Advertising Requirements* (200 East Illinois Street, Chicago 11, Ill.), April, 1958. Reprints 25 cents. If the \$3 billion worth of direct mail issued annually is not to be treated as "junk," it must be both professionally executed and strategically distributed, this article points out. As a comprehensive guide to improving direct mail, it offers tips in such areas as effective sales messages, mail order strategy, building a mailing list, effective formats, and postal regulations.

A COMPLETE GUIDE TO SALES INCENTIVES. By R. C. Ausbeck. *Industrial Marketing* (200 East Illinois Street, Chicago 11, Ill.), March, 1958. 50 cents. A successful sales incentive program must: (1) motivate every participant, (2) achieve preselected sales targets, (3) sustain participant enthusiasm throughout the program, and (4) pay for itself out of extra sales, main-

tains the author. In this practical guide to achieving such a program, he includes information on types of incentives, step-by-step planning and imple-

mentation, and the use of professional incentive organizations, as well as presenting a checklist of objectives which a sales program can accomplish.

RESEARCH AND DEVELOPMENT

EXPLORE PERSONALITY FACTORS IN R/D. By Frederick L. Ryder. *Industrial Laboratories* (201 North Wells Street, Chicago 6, Ill.), March, 1958. Gratis. Although engineering is supposedly work of an objective character, it is important to consider the personality traits of an engineer in the initial selection, on-the-job evaluation, and distribution of assignments, maintains the author. In exploring some of the personality traits that affect the practical performance of engineers—such as intuitiveness, technical mindedness, and sensitivity to criticism—he gives examples and demonstrates how the best results may be obtained from various personality types.

THE RARE EARTHS. By Melvin Mandell. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N.Y.), February, 1958. 75 cents. *Praseodymium* and *ytterbium* may never become household words, but they and 13 other members of the "chemical brotherhood" of 15 not-so-rare metals known as the rare earths are moving into the industrial spotlight these days, reports the author. He describes the contributions that rare earths—long-neglected because of ignorance about their unusual properties—may make to the improvement of steel and other major metals, refinery efficiency, pharmaceuticals, rocket fuels, electronic amplifiers, and anti-smog techniques.

FINANCIAL

ASSESSING THE FED. By Raymond Rodgers. *Challenge* (475 Fifth Avenue, New York 17, N.Y.), March, 1958. 20 cents. The Federal Reserve System's awesome responsibility for maintaining economic stability while encouraging the maximum sustainable rate of growth makes it vitally important that the system be subjected to basic revisions in order to equip it to effectively play its part, believes the author. In this article, he discusses the powers held by the Federal Reserve Banks, the problems involved in wielding those powers, and recommendations that have been made for changing them.

THE USE OF MANAGEMENT YARDSTICKS FOR CAPITAL EXPENDITURE DECISIONS. By Edward G. Koch. *The Controller* (2 Park Avenue, New York 16, N.Y.), January, 1958. 65 cents. Despite the fact that many companies

have freely revealed the techniques they use for determining acceptable yardsticks for planning and controlling expenditures, the author says, most of them are silent on the specific "pars" that guide their investment decisions. In this article, he discusses the types of pars frequently adopted to justify capital expenditures, the techniques of determining and using these yardsticks, and the limitations in the use of such standards for investment decisions.

THE 1958 BUSINESS EXPECTATIONS SURVEY. By Murray F. Foss. *Survey of Current Business* (Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.), March, 1958. 30 cents. According to reports by U.S. companies to the Office of Business Economics and to the SEC, made between late January and early March: (1) Businessmen expect to spend \$32

billion on new plant and equipment during 1958, a 13 per cent reduction from last year's record \$37 billion; and (2) manufacturers as a group expect their sales to run a little more than 2 per cent below the record sales of 1957. This article analyzes the pre-

dicted outlays in terms of industry groups, concluding that there will be large reductions in spending by manufacturing and transportation companies, small cutbacks by mining and commercial firms, and very little change by public utilities. Tables.

FOREIGN OPERATIONS

GETTING THE CASH FOR YOUR OVERSEAS SALES. By Alexander O. Stanley. *Dun's Review and Modern Industry* (99 Church Street, New York 8, N.Y.), March, 1958. 75 cents. Foreign import, export, and exchange controls, which make it harder to sell and harder to collect on dollar shipments, have been plaguing companies engaged in foreign operations for some years, and the author sees no reason to believe that this pattern will vary in the future. But forewarned is forearmed, and this article helps the businessman to prepare for the types of regulation that will be encountered in each of the 20 most important foreign markets.

MARKETING IN CANADA—TODAY. By H. Jay Bullen. *Industrial Marketing* (200 East Illinois Street, Chicago 11, Ill.), March, 1958. 50 cents. Although about 60 per cent of Canada's manufacturing industries are now owned by U.S. firms, Canadians are still interested in continued U.S. investments—especially in such fields as iron and iron products, nonferrous metals, textiles and textile products, and chemicals and allied products, the author reports. The article reviews the major economic, political, and demographic factors that affect industrial marketing in Canada today, and evaluates the potentialities that exist for U.S. businessmen.

INSURANCE

STABILIZING INCOME THROUGH INSURANCE. By John D. Long. *Business Horizons* (School of Business, Indiana University, Bloomington, Ind.), Winter, 1958. \$2.00. Is "chronological stabilization" insurance—which proposes insuring companies against such hitherto uninsurable risks as strikes, unexpected technological obsolescence, and shrinkage of security or of real estate investment value—a workable device for stabilizing business earnings? The author examines the degree of predictability of such insurance and weighs the advantages on the basis of income stability and the cost of meeting contingencies, concluding that the proposal deserves management's careful consideration.

YOU NEED TRAVEL INSURANCE. By Joseph R. Barr. *Management Methods* (22 West Putnam Avenue, Greenwich, Conn.), April, 1958. 75 cents. Prior to World War II, the author says, only top executives and salesmen traveled with any frequency, but today junior executives, engineers, and key technicians are often away from their offices for days at a time, and even clerical workers are frequently assigned to branch plants or sales conferences. To provide protection for this vastly increased number of traveling employees, three general types of coverage are available, and the author describes these policies, discusses their costs, and gives case examples of how management is using travel insurance today.

Profit Opportunities in Atomic Energy

(Continued from page 34)

ment to find out what's needed and to determine how existing products may be adapted to fill the need. The responsibility for this job should not fall solely on one man, but on every man in your organization. Those in technical and sales groups should be especially alert to opportunities. Establish entry into this market as a corporate objective, and go to work using the manpower that is already familiar with your business.

Those who wish to go further into the market with an eye toward the future should take this first step first. It provides a sound basis for any further activity that appears desirable and feasible after early exploratory efforts.

THE QUESTION OF SECURITY

Up to this point, businessmen don't need to concern themselves about security problems; salesmen and technicians can talk about existing product lines with AEC and contractor's representatives without clearances.

When it is finally determined that an attractive market for existing products exists or that a definite long-range product-development program is desirable, application should be made for access to restricted data relating to civilian applications of atomic energy.

Application for access to restricted data is made by requesting copies of Form AEC-378 from the U.S. Atomic Energy Commission, 1901 Constitution Avenue, N.W., Washington 25, D. C. In completing this form, application is made for confidential and/or secret data. Those who are taking this second step in expanding with this industry would be well advised to make initial application for access to confidential data essential to specific subjects they wish to explore to a further degree. At a later date they may amend this application to cover access to any secret data specifically needed.

There are no special problems involved in obtaining an access permit. Once a permit is granted, an AEC operations office is assigned the responsibility for processing requests for security clearances and storage facility clearances. The latter relates to the

availability of approved safe-files and adequate procedures for document accountability.

EXAMINING THE RISKS

The problem of hazards and inherent liabilities associated with these hazards always arises in the minds of prudent business executives. When considering atomic energy, the natural tendency is to think of radiation hazards, but two other types of liability create even greater financial risks—product liability and third-party liability.

The use of materials involving radiation hazards is largely a calculated and controllable risk. Experience has shown how these materials can be handled in ways that minimize risks—although at added costs that result from control measures themselves. Such risks are insurable to a degree.

Most suppliers, however, will not be concerned with radiation hazards at all. For the vast majority of companies dealing with the atomic energy industry, product liability and third-party liability will be the chief concerns.

PRODUCT AND THIRD-PERSON LIABILITY

Product liability presents problems having the gravest of implications. Corporations may be subject to damages of catastrophic proportions as a result of product failures. This is a matter of current concern to all—suppliers, contractors, the Atomic Energy Commission, and Congress—and it will undoubtedly be the subject of a ruling by the Supreme Court.

Product liability is a matter in which the jury determines the facts—the court determines the law. Products entering into atomic energy markets are subject to the same laws touching on product liability that apply to all other products, but all-risk product-liability insurance policies may not adequately protect the seller of products to the atomic energy industry.

Failure of his product may result in physical damage to the reactor, to the surrounding community, and, depending upon weather conditions, to remote communities and larger areas. Loss of human life may result, and animals, crops, and other vegetation may be destroyed.

Although some steps have already been taken to remedy this situation, none as yet provide adequate protection. Nor can the supplier cover himself by selling his products on terms that incorporate a waiver of rights to sue for damages. No corporate buyers of such products have sufficient capacity to provide adequate protection from third-party claims.

In view of these risks, one might wonder why any business executive is willing to venture into the atomic energy industry. The best answer is that current interest and investment is based on the assumption that legislative action will be taken to protect private business from uninsurable risks, and most commitments are of a provisional nature contingent upon ultimate protection against liability. The situation at present is undoubtedly risky; those producing equipment are in jeopardy as long as this condition, in which liability is only partially insurable, is allowed to exist in the business community.

MANPOWER CONSIDERATIONS

The rapid growth of the atomic energy industry has created manpower problems that must be understood by those who contemplate expanding into this field. Successfully coping with these manpower problems is essential to survival in this industry.

Opportunity ceilings in atomic energy development have been set in part by available supplies of technically qualified manpower. An additional 10,000 men and women will be required in atomic power development programs alone in the next few years. The problem of training or diverting 10,000 scientists and engineers into these positions would not assume alarming proportions but for the fact that this must be accomplished in an economy in which the shortage of scientists and engineers is growing in magnitude year by year.

Atomic scientists and nuclear engineers receive so much attention that one might easily arrive at the conclusion that such individuals are a new type of specialist—an elite recently come into being. Were this true, one would wonder how such programs could have developed initially.

Reactor development itself is based on research in the field of physics. In this activity, six out of ten men may have degrees in

physics or mathematics. Their efforts are augmented by chemical, electrical, and metallurgical engineers. Manpower directed at the development of construction materials and fuel elements is generally divided fairly between metallurgical and chemical engineers. At the point of application, mechanical and electrical engineers dominate the scene. In fact, engineers and scientists in the field place the heaviest emphasis on mechanical engineering training and relatively little emphasis on training in nuclear physics as a prerequisite for work on atomic programs.

THE ELUSIVE EXPERTS

What gives rise to the scarcity of scientific and technical personnel? First, of course, are the requirements of a rapidly expanding economy. Second, as this economy has expanded, technological development has assumed an increasingly important role, compounding demands for technically trained personnel.

In the United States, approximately 750,000 engineers and 250,000 scientists are available to industry, the government, universities, and nonprofit organizations. Technical schools are graduating an estimated 37,000 engineers each year, including 5,000 with master's degrees and 600 with doctorates.

In round numbers, 40,000 engineering graduates are urgently needed annually, and an additional 20,000 could be used by accelerated programs. In addition, 10,000 graduates at the doctoral level in the sciences are required. Atomic power development programs alone could absorb 5,000 additional engineers and scientists each year.

Nothing on the horizon suggests that there will be any immediate change in the supply of scientists and engineers. Projections suggest that the output of engineers and scientists will meet current demand levels some time after 1960, but there is every reason to believe that demands will be considerably accelerated by that time.

SHORT-RUN MANPOWER STRATEGY

To combat this growing shortage of scientific and engineering personnel, executives must establish carefully formulated plans if they are to maintain a competitive position. Certain steps that can be taken will have an immediate effect. Other action can produce

this
the
por-
ers of
ction

s ex-
The
n the
ivate
of a
against
pro-
n, in
n the

man-
plate
power

been
power.
atomic
The
ineers
ut for
which
nitude

ention
viduals
being.
d have

field of
rees in

results only in a future period—some four to eight years from now.

Management should recognize that, in general, it has failed to create an environment that attracts and holds engineering and scientific personnel. In an attempt to compensate, the frenzied practices of harassed recruiters have turned disorder into chaos. A management housekeeping job must replace further overexpansion of high-pressure recruitment forces.

Action must be taken to keep professional people in professional jobs. Here are some of the factors that make technical positions worthwhile, according to scientists and engineers: opportunity to do interesting, challenging, or important work, and to have more freedom or responsibility; adequate compensation, and opportunity for economic advancement; desirable working conditions with respect to equipment, plant facilities, and the handling of service functions; opportunity to work with competent and congenial co-workers; opportunity for professional development, advancement, and recognition; opportunity to work under competent supervisors; control over matters of personal convenience and preference; development of personal security; and opportunity for advancement.

INCREASING SCIENTIFIC OUTPUT

Scientific and engineering output can be stepped up immediately by using these resources more efficiently. At present, not only are functions confused, but scientists and engineers are often given work that can be better handled by technicians. It is not surprising to find more than 50 per cent of an engineer's or scientist's time taken up with routine activities. Industry can't afford the luxury of such waste of technical manpower. Better programming and scheduling of assignments, reclassification of technical personnel, and the implementation of training programs will show immediate results in increased effectiveness.

Beyond this, management can increase output by making better tools available for use by professional people, replacing these tools with even more advanced equipment as rapidly as such equipment becomes available. New technical tools are more than timesavers; they represent new technologies. The modern engineering laboratory needs such tools for advanced work.

Of course, the final solution to the shortage of scientists and

technical personnel can only come through the schools and colleges of the country. To insure that the students who will be the scientists of the future will have a sound education, a number of remedial measures are necessary. First, more emphasis in teacher training must be placed on competence and less upon the technical process of teaching. Too many graduates of our schools of education appear indifferent to the subjects they are teaching. Such attitudes do little to inspire interest in a subject on the part of a student. Second, salary levels must be adjusted to place the salaries of competent teachers and professors on a competitive level with those in industry. This may require lengthening the working day and year for such teachers and professors to justify placing their compensation on a comparative basis with that offered by industry. Third, a general review should be made of our entire educational system, taking into consideration possibilities of lengthening the school year, strengthening the program, and raising levels of competence for school administrators. Fourth, entrance requirements for colleges and universities should be tightened. Courses currently conducted at the trade school level should be discontinued, and faculty, plant, and equipment resources should be devoted to the true purpose of the higher educational program.

THE WORLD-WIDE OUTLOOK

This country is competing in the world markets for atomic power. Executives who attended the recent Geneva Atomic Conference learned enough to shatter any complacency they may have enjoyed in regard to our own imagination and ability. We are not competing with Russia alone; this is a world-wide race. Great Britain, for example, has taken tremendous strides in the development of nuclear equipment and in developing markets for this equipment throughout the world.

If we fail, our own technological and closely related economic development will be retarded. If we fail, the security of this nation from military attack will be seriously threatened. Our defense as a nation is inseparably tied to the development of nuclear technology, and anything that weakens progress in that field lessens our ability to protect ourselves. Atomic energy development is the foundation on which this country's future economic and military security rests.



SURVEY OF BOOKS FOR EXECUTIVES

AUTOMATION AND MANAGEMENT. By James R. Bright. Division of Research, Harvard Business School, Boston, 1958. 280 pages. \$10.00.

*Reviewed by Carroll W. Boyce**

For the scholar who wants a searching examination of the practice and philosophy of automation in its first decade (1945-1955), and particularly in the latter half of that decade, *Automation and Management* stands without peer. As an historical document in the field, it takes its place beside John Diebold's pioneering volume, *Automation: The Advent of the Automatic Factory*.

Mr. Bright has had a distinguished career as editor of two magazines (*Product Engineering* and *Modern Materials Handling*) and as Associate Professor of Business Administration at the Harvard Business School. Such a background entitles him to speak as an authority in his own right, and, indeed, he has done so brilliantly from many lecture platforms in the past few years.

* Manager, Editorial Features and Departments, *Factory Management and Maintenance*.

Unfortunately, Mr. Bright seems to have felt constrained to limit himself to a strictly reportorial statement of the conditions and consequences of "automation" as they existed in 1954 in the 13 companies chosen for study under a research grant. (Six of the plants studied are in the automotive and automotive parts industry; only two are identified by name.) The straight reporting of the case studies is a rather lackluster affair; but when the strain becomes too great and the author decides to cast his professorial caution to the winds and speak for himself, the reader finds incisive passages that stand out like a flashing beacon on a storm-swept shoal. The pity is that Mr. Bright doesn't speak out more often.

Happily, there are three chapters that are almost entirely original contributions. The first of these, "The Nature of Mechanization and the Concept of a Mechanization Profile," is a definitive version of Mr. Bright's much-discussed lecture on the "levels of mechanization." Even the lucky few who have heard this lecture will find his definitions of the 17 "levels" challenging and the construction of a "profile" of a company tremendously stimulating. Prognostication is al-

ways a risky business, but in view of the impact made by this analysis in lecture form, it seems safe to say that in this chapter Mr. Bright has made a contribution to management literature that will rank as a true classic.

In the next to last chapter, "The Impact of Automation on Sales," Mr. Bright delves with rare insight into an oft-neglected aspect of the subject. For the executive who has blandly assumed that automation is a "problem" solely in terms of the production function—however broadly that may be defined—this chapter can be an eye-opener worth a hundred or a thousand times the cost of the book.

Mr. Bright concludes with a potpourri of personal observations in a chapter with the catch-all title of "An Interpretation of Automation, Its Effect on the Factory, and Its Impact on Management." In this final chapter, he takes a big stride away from the mechanics and minutiae of automation "on the factory floor" and views in a true management perspective the sweeping implications of the onrush of automation. Rarely have so many cogent observations been packed into the space of a longish magazine article.

Perhaps I have been unfair in my comments thus far—not so much to Mr. Bright as to the potential reader

AMA's new publication on a vital subject . . .

UNDERSTANDING COLLECTIVE BARGAINING THE EXECUTIVE'S GUIDE

UNDERSTANDING COLLECTIVE BARGAINING is AMA's comprehensive new handbook on every aspect of the collective bargaining process. In nontechnical language, more than 40 authorities show—

- **How to prepare for contract talks**
- **How to check the contract for clarity and precision**
- **How to reevaluate bargaining issues**
- **What to do when a strike occurs**

A valuable appendix contains actual company materials used in collective bargaining. Written from a practical and realistic point of view, *Understanding Collective Bargaining* is the *one* book for every executive who must know the basic facts about the collective bargaining process. 416 pages; \$7.50 (AMA members: \$5.00).

Order from **DEPARTMENT M5, AMA, 1515 Broadway, New York 36, N. Y.**

AMA will pay normal postage and handling charges on all orders accompanied by check or money order. Orders under \$5.00 should be accompanied by remittance. Orders of \$5.00 or more, unless accompanied by remittance, will be billed for postage and handling charges. Add 3% sales tax for orders to be delivered in New York City.

of this book. For it does have values apart from the three chapters mentioned. None of the 13 case studies that are the major subject of the first two-thirds of the book are treated in the same depth as the seamless pipe mill in Charles R. Walker's *Toward the Automatic Factory*; yet these are genuinely "studies in depth" by any reasonable standard, and the reader has the advantage that the cases are drawn from a variety of industries.

My principal reservation about the value of these studies is that they are of plants built in the years 1949 to 1954. (Mr. Bright apologizes for the fact that the Plymouth engine plant of 1955 was completed too late

for inclusion.) While, obviously, not every plant doing business now is operating at such a level of sophistication—in terms of automation—that it cannot learn and benefit from the experience of the automation leaders of four years ago, I have to agree with Mr. Bright's concluding observation: "The hard and powerful truth for management is that the advanced plant of 1954 is in 1957 only a 1954 plant—it is no longer 'advanced.'"

That's Bright talking, not reporting. And he does enough talking—as opposed to reporting—to make this book urgent reading for any executive interested in the survival of his company in an age of advancing mechanization.

AMA CONFERENCE CALENDAR

MAY-JUNE, 1958

<u>DATE</u>	<u>CONFERENCE</u>	<u>LOCATION</u>
May 5-7	SPRING INSURANCE CONFERENCE	Statler Hotel, New York
May 5-7	SPECIAL RESEARCH AND DEVELOPMENT CONFERENCE on How to Capitalize on Research and Engineering Talent	Huntington- Sheraton Hotel, Pasadena
May 14-16	GENERAL MANAGEMENT FORUM for Small Business	Biltmore Hotel, New York
May 15-16	SPECIAL MARKETING CONFERENCE on Sales Forecasting	Drake Hotel, Chicago
May 19-21	SPECIAL PERSONNEL CONFERENCE on Labor Relations	LaSalle Hotel, Chicago

[SEE COVERS FOR ADDITIONAL ANNOUNCEMENTS]

To register or to obtain additional information on any of the conferences listed above, please contact Department M5, American Management Association, 1515 Broadway, New York 36, N.Y.

isly, not
now is
phisticated
—that
from the
leaders
ree with
ervation:
truth for
advanced
a 1954
ed."
t report-
alking—
make this
y execu-
al of his
dvancing

DAR

TION

Hotel,
York

ngton-
n Hotel,
dena

e Hotel,
York

Hotel,
icago

e Hotel,
icago

above, please
ork 36, N. Y.

The Packaging Event of the Year . . .

27th NATIONAL PACKAGING CONFERENCE AND EXPOSITION

The Conference: May 26-28, 1958. Statler Hotel, New York City

The Exposition: May 26-30, 1958. New York Coliseum, New York City

See the Tools . . .

. . . at the Exposition, the nation's biggest exhibit of modern packaging materials and equipment. All four floors of the huge New York Coliseum will be taken up by the most brilliant packaging show yet. You'll see thousands of packages with diverse closures . . . materials . . . designs—packages that are winning new customers in every conceivable kind of market . . . machinery and equipment that is setting new records for packaging efficiency. You'll pick up new ideas that will cut your packaging costs . . . add to the sales appeal of your product . . . heighten consumer interest.

Learn the Techniques . . .

. . . at the Conference, where you'll get the inside story of some of the country's most efficient packaging lines. You'll find out how companies in keenly competitive industries are lowering unit costs by reducing breakage . . . using the packaging line as a major tool in inventory control . . . increasing packaging speeds and efficiency through skillful line layout, the use of automation, and new high-speed equipment.

Whatever your product, if it comes in a package, both of these events are a must. That's why for 27 years packaging men—and those in related areas such as production and materials handling—have been getting the facts at AMA's annual Packaging Conference, then "shopping the show" at the Exposition.

Make your plans to attend now! Address Dept. M5, Packaging Division, AMA.

AMERICAN MANAGEMENT ASSOCIATION, INC.
1515 Broadway • Times Square • New York 36, N. Y.

MARKS OF LEADERSHIP



ANALYZING

Management may be defined *broadly* as a job of problem solving . . . more *specifically*, as a job of problem analysis, solution and action.

It calls for the kind of analysis — as a prelude to action — that is taught at AMA's Management Course. Here, for example, executive functions are examined and separated into constituent parts . . . and the basic components are then reassembled so a picture emerges of what management action should and can be.

In all AMA activities — meetings, publications and services — the emphasis is on the analytical approach to better managerial performance. By analyzing the elements of business problems, members arrive at more workable solutions.



EDUCATION IN DEPTH
FOR MANAGEMENT, OF MANAGEMENT, BY MANAGEMENT

S

A M